DOCUMENT RESUME

ED 069 569 SO 004 884

AUTHOR	Nyberg, Rene, Ed.
TITLE	Educational Reform in Finland in the 1970's.
PUB DATE	70
NOTE	129p.
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	Adult Education; *Comparative Education; Educational Change; Educational Development; Educational History; Educational Sociology; *Foreign Countries; Higher Education; Primary Education; Secondary Education; Teacher Education; Vocational Education
IDENTIFIERS	Educational Systems; *Finland

ABSTRACT

The overall educational strategy within the relevant historical, social, and economic contexts is described in a summary of the broad outlines of Finnish educational systems and reforms. Explanation of the comprehensive school experiment for primary, secondary, and vocational education precedes discussion of the higher education system, teacher education, and adult education. Eighteen graphic appendices and a bibliography supplement the text. (Author/SHM)

Reference Publications 4
MINISTRY OF EDUCATION
HELSINKI 1970

FILMED FROM BEST AVAILABLE COPY

Educational Reform in FINLAND in the 1970s

SP004884

1

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

Educational Reform

in

FINLAND

in the 1970s

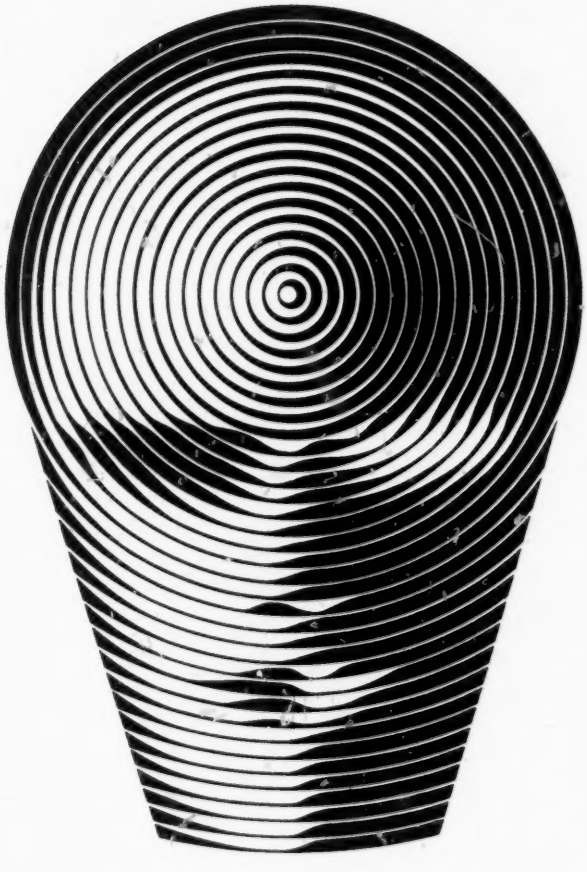
Edited by René Nyberg

HELSINKI 1970

Munkkiniemen Kopiolaitos
O f f s e t
Helsinki 1970

CONTENTS

FOREWORD	
INTRODUCTION	1
PRIMARY AND SECONDARY EDUCATION	13
VOCATIONAL EDUCATION	31
HIGHER EDUCATION	47
TEACHER TRAINING	67
ADULT EDUCATION	77
APPENDICES	93
BIBLIOGRAPHY	



ANNEE INTERNATIONALE
DE L'EDUCATION – 1970

1970 – INTERNATIONAL
EDUCATION YEAR

FOREWORD

This booklet is a Finnish contribution to the international discussion inspired by the celebration, in 1970, of the International Education Year. It's aim is to describe to the foreign reader and the international educational community what is happening in Finland's educational system when a new decade opens up.

This booklet is, by necessity, only a summary of the broad outlines of Finnish educational reforms. It has not been possible to go into details which may be of interest to experts. But there are, and will be more, detailed reports available for those wishing to know more about how Finland is reorganizing her educational system.

This is not an official text but appears for information only. The authors are well aware of the many value-loaded issues inherent in any educational reform of which there is not, and can never be, a complete unity of opinion. In the interest of brevity and clarity it has been necessary to eliminate more thorough discussion about these points, however much they would have merited a treatment.

This booklet aims at describing the overall educational strategy within the relevant historical, social and economic context.

We feel that this strategy corresponds to the aims of the International Education Year as defined by the General Assembly of the United Nations and the General Conference of Unesco.

MINISTRY OF EDUCATION
Department for International Relations

INTRODUCTION

Education in a broad sense has been a privilege of only limited social groups during the past centuries. Although this has probably been less so in the Scandinavian countries than elsewhere, popular education proper was not started in Finland until the middle of the 19th century. Schools and popular education had been entrusted in Finland as everywhere to the Church since the Middle Ages. The Reformation meant a considerable change in the cultural life of Finland. The first book in Finnish, the language of the majority of the population, appeared in 1542 – it was of course an ABC book, written by the Finnish ecclesiastical reformer Mikael Agricola. A translation of the Bible was published shortly afterwards and so was other religious literature.

Thus, the early history of popular education in Finland is a history of religious and particularly Lutheran instruction. As early as the 17th century the Church set itself the ambitious goal of teaching the people to read. An utterly efficient sanction against the reluctant was the requirement that everybody had to know the basic Christian doctrines before confirmation and marriage. This meant that a formal

ability to read became general relatively early, although the further development of real popular education was not possible, partly because of a lack of books and literature in the vernacular before the middle of the 19th century (the official language of Finland, which was at that time a part of Sweden, was Swedish). Nevertheless this early popular education did yield certain results, although these were unfortunately overestimated both by certain romantic historians and by a majority of the decision makers of the last century.

Nevertheless, literacy was common, in the sense that most people were able to read (or recite by heart) religious literature, which was practically the only sort of literature available. On the other hand, writing was understandably of much lesser use, and in consequence considerably stiffer. Anyway, a certain standard, not disparageable in itself, had been reached, and this furnished a starting-point for a new general education.

The development of education in Finland is organically and closely connected with the European cultural heritage. In the Middle Ages Finnish scholars were mainly educated in the big universities of the European continent, above all in Paris, Prague, Bologna, Leipzig and later in Greifswald and Rostock. During the first decades of the Russian regime, cultural influences from Europe gave also birth to romantic nationalism among the educated class in Finland. Initially a rather modest idealistic movement, it later developed into what has been called the national awakening. The core of this movement was the language question. Swedish was naturally maintained as the official language even after the separation of Finland from Sweden. The Swedish language, Swedish law and

the Lutheran Church provided in a sense the initial basis for Finland's autonomy and emphasized her difference from the Russian Empire. Nevertheless, a vast majority of the people was thus literally forced aside, as it did not understand Swedish. One of the basic ideas and goals behind the national awakening was to improve the position of the Finnish language and thus to provide the majority of the population not only with a possibility but also a right to use its own language in all spheres of social life. A quotation from J.V.Snellman, the leader of the "Fennomans" and the national awakening, illustrates the problem: "When the educated people of a country speak one language and the rest of the nation, the masses, speak another, the language of the educated class has no power of survival; to the common people it is quite the same whether this language be Swedish or Mesopotamian. When school is taught and law and justice are administered in a language the rank and file of the nation do not understand, the rank and file do not even notice when one language replaces another." Snellman clearly referred to the relations of the autonomous Grand-Duchy of Finland to the Russian Empire: for, being a true Fennoman, he felt that only a national Finnish culture based on the Finnish language could ensure the future of Finland as a nation in the visinage of its vast neighbour.

The complicated and prolonged cultural struggle, called the language feud, ended in the victory of the Fennomans. This victory brought with it a period of rapid progress and development of the Finnish language and culture. Its impact on both popular and higher education was of course considerable. The first secondary school teaching in Finnish was

founded in 1858 in the town of Jyväskylä. Five years later the first training school for primary school teachers also started its work in Jyväskylä. In the same year, 1863, a Language Edict was given by Czar Alexander II, the Grand Duke of Finland, that insured the Finnish language equal status with Swedish in direct dealings with the public. The deficient knowledge of Finnish possessed by civil servants made it impossible, however, to force its immediate adoption as a language of administration and justice; a period of grace of 20 years postponed the final enforcement of the Edict.

As mentioned above, development was fast and in the 1880s the number of Finnish-speaking students at the University of Helsinki was equal to the number of those speaking Swedish; in 1894 Finnish was first used in the session of the Great Senate (consistorium maius) of the University. At the beginning of 1900 the enrolment of Finnish speaking students in the secondary schools of the country was twice that of Swedish speaking students. The same trend can also be seen in the development of the whole population (see Appendix 16).

The efforts made to improve popular education formed of course an essential part of the cultural struggle. Shortly after the founding of the first primary school teachers' training school a decree concerning primary schools was given in 1866. This was just a beginning; Finland lagged far behind its Scandinavian neighbours in what concerned school matters. A comparison with Denmark, for example, which introduced compulsory education as early as 1814 is, however, neither fair nor fruitful. The fact in itself that Finland was an autonomous Grand-Duchy and not an independent state makes comparison difficult and the disparity in the density of

population between the two countries meant that the starting positions were entirely different.

The first efforts made to realize compulsory education in Finland were turned down by the Russian governor-general and the Government; nevertheless a Compulsory School Founding Act, which obliged every school district (municipality) to start a school, was achieved in the late 1890s. In the following years all political and cultural activities in the country were overshadowed by events that characterized the so-called period of oppression and Russification (1899–1905 & 1907–1917), and although consensus of opinion was soon reached on the importance of compulsory education and the general development of popular education, nothing could be achieved during the last decades preceding national independence. The Act on Compulsory Education was finally passed in 1921.

The impact of the national awakening on the development of cultural life in Finland was immense. The dynamic coming of age of the Finnish language mobilized the existing reserves, and in no time the formerly despised peasant language was able to produce literature and poetry; especially the publishing of the national epic "Kalevala" in 1835 and 1849 marked a turning point. The influence of this evolution was perceptible in all spheres of society. By the time of the declaration of Independence (6th December, 1917), and even before, the Finnish language had ensured itself a firm position consistent with the fact that it was the native tongue of the majority of the population. Although the language feud continued and gave rise to great bitterness, the peak had already been passed. The rapid progress naturally had its

biggest influence on cultural life, especially on the development of educational institutions. Not only popular education was promoted, although it naturally constituted the primary precondition for both vocational and higher education, but also the development of voluntary adult education (largely after Scandinavian examples), in connection with general social developments such as those in the labour movement, meant an important contribution to the formation of Finnish society.

The University of Helsinki, founded in 1640 in Turku (Åbo), was the only higher educational institution of the country until 1917, when a private Swedish-language university (Åbo Academy) was founded in Turku, and three years later a private Finnish university also started its work in the same city. The expansion of education in Finland is, however, actually a product of the period following the Second World War. The total number of persons receiving education has almost doubled over the past 15 or 20 years.

During the period 1950–1965 the number of children receiving primary education rose by an average of 3 per cent a year. The corresponding figure for secondary schools was 7 per cent, although in the late 1950s, for instance, the rate of rise was considerably higher or 11 per cent. In the vocational schools and colleges it was 7 per cent. At the universities the enrollment figures rose at an average rate of 7 per cent a year, and in the mid-1960s the figure was approximately 11 per cent. This development has resulted in important changes in the percentage distribution of students by the fields of study and levels of education (see Appendix 1). The share of those receiving primary education is steadily decreasing, and accord-

ing to a recent statistical prognosis, half of the whole working-age population will have received vocational training by 1985; in 1960 the corresponding proportion was less than a sixth – i.e. the number of those receiving education is going to be quadrupled in 25 years.

The strain of the rapid increase in the number of students has been divided comparatively evenly among all different school forms; nevertheless, the increase in the number of students has been particularly sharp in the universities, vocational schools and colleges and senior secondary schools. In 1950 there were some 15000 university students in Finland and today (1970) they number approximately 55000. The figures for other branches show a similar explosive trend. The rapid expansion of education at all levels requires a great deal of organization and planning of the administration. The process that is now going on at all the different levels is bringing with it a thoroughgoing change of the whole educational system. The reform of basic education, resulting in a nine-year comprehensive school, constitutes a starting point for all other measures, and not a single branch of education in Finland has been left untouched. The need for a total reform and reorganization derives from the rapid social and technological development characteristic of our environment – a problem and, at the same time, a challenge common to all parts of the world.

The 1970s require not only organizational and institutional reforms but also intensive and continued planning. A State Schooling Structure Committee drew up in its report the general outlines for the development of, and set the goals for, the post-comprehensive school stages. The committee

emphasized two objectives of the general educational policy:

To be able to meet the demands of the integrating world, education has to take into consideration both the needs of and the qualitative and quantitative changes in productive activities. At the same time education should provide the individual with the best possible prerequisites for participation in life. On the other hand education should disengage itself increasingly from productivity and profitability aspects. It should even function as a counterweight to these and become a field for man's intellectual activity and growth, where he can acquire information about himself and his environment, independently of goals forced upon him from the outside.

This activity should be regarded as an intrinsic value, and students ought to have an opportunity to participate in the decision-making through which the nature and content of this activity are determined.

These twofold goals may be regarded as controversial, yet they cannot be dealt with separately, since they form an integral whole. The profitability aspect cannot be neglected, because it provides a basis for the welfare on which all intrinsically valuable education rests. On the other hand, an overemphasis of efficiency is bound to lead to a barren technocracy. And in wiev of the future of enormous technological evolution and its social consequences the development of the free activities of those engaged in the productive process lies in the very interest of all.

Increasingly detailed plans and principles are also necessary for the formulation of educational policy and the development of educational institutions. Flexibility is an

essential aspect of all adequate planning based on statistical material. The same applies to the entire system of education. Thus the numerous reforms that are being planned or carried out at present rest on this principle. Education has to follow general development, and adapt itself to development, in order to meet the needs of changing society. This requires an organization that, rather than preventing a continued revision of the teaching methods and curricula, promotes their revision.

All individuals should have an opportunity to continue their studies, by proceeding from the educational level they have attained. This implies that the present system leading to educational blind alleys should be replaced by another, which permits to combine and utilize previous studies to a larger extent. An endeavour to "open passages" is indeed one of the basic motives underlying the entire school reform in Finland (see Primary and Secondary Education). One of the leading principles of this policy is called the principle of "cumulative education". It requires that post-comprehensive school education be organized so as to consist of a sequence of increasingly exacting levels, in such a way that examinations of the same level, though passed in different types of educational institutions, will be accepted equally and that studies of another branch or in other schools will be as far as possible accepted as a part of the same course of study. The students should also have the possibility to continue their studies later on by passing examinations and specially acquire higher competence.

The report of the Committee deals mainly with the forecasting of the need for various-level schooled manpower in

Finnish society. It also sketches, however, some important general lines to be followed in educational policy during the next decade in Finland. The principles of this policy have been stated before by several other committees and in the laws passed as result of their work. Nevertheless the report of the Schooling Structure Committee is one of the most important achievements in the field of educational policy planning in Finland.

The thoroughgoing reform of the whole educational system of Finland has reached by now, at the beginning of the 1970s, a kind of half-way post. Detailed plans for the execution of the reform exist for almost all branches of education, but their implementation still lies ahead. Educational policy cannot, however, be efficient unless both the goals set up and the plans framed for their achievement are subject to constant revision. Only the demand for a flexible educational system renders it possible to achieve these grades and thus also to carry out an educational reform that meets the requirements of the future.

PRIMARY AND SECONDARY EDUCATION

Compulsory education in Finland requires eight years of schooling at present – either six years of primary school plus two years of civic school or four years of primary school plus the rest in the five-year junior secondary school. Only the latter provides a possibility to continue studies in the senior secondary school and, later on, at the universities and other institutions of higher education.

A principle of parallel education, implying sharp divisions and an early compartmentalization of pupils, which has literally led to educational blind alleys, has been characteristic of the Finnish school system.

Strong demands for replacement of the parallel system by another, completely different system have been raised not only because of social considerations but also for purely practical and economic reasons. The present system is very unjust socially, because of both economic and geographical factors. Particularly in the remote parts of the country, financial problems of the family often prove disastrous to the schooling opportunities of the children. Finland with an area larger than that of Italy (337.000 km^2) but with a population

of no more than 4.7 million still has regions where distances to the nearest school can by no means be considered reasonable. And as instruction in primary schools is given free of charge and as it is up to the municipality to provide primary school pupils with transport, housing (if needed), textbooks and school meals, whereas the secondary schools, in spite of being maintained or supported by the State, charge tuition fees and do not offer their pupils the above-mentioned social benefits, the parents' economic status and domicile affect the choice of education.

But also educationally the present system, which classifies school children at the age of eleven into those predestined to theoretical schooling and those who will receive non-theoretical (vocational) training, has proved unsuitable. The rapid industrialization of the country, the mechanization of forestry and agriculture, the gradual development of the service sector into the largest occupational group, and the increasingly close and complex legislative, spiritual and economic interrelationships in society presuppose vocational education for the whole population, and this is only possible on the basis of a satisfactory *general education.* In consequence of this development parents wish to give their children an opportunity to attend schools that open up a maximum of further study possibilities, namely, the present secondary schools. As a result, the proportion of the pupils of primary schools that continued their studies in secondary schools, which was 24 per cent in 1950, rose to 35 per cent in 1959 and to 59 per cent in 1969, and it is expected to be as high as 80 per cent in 1975. This trend gives rise to financial problems, as both parallel forms of school have their own

premises and equipment. Social problems arise from the fact that the position of those who are left outside the secondary schools becomes increasingly difficult in respect of further studies and placement on the labour market.

To sum up, had a new school system not been introduced, a lack of pupils would have led to a virtual abolition of the upper level of the primary school and the civic school, and for the remaining pupils this would have been a socially and educationally unbearable situation.

Therefore, an act creating a nine-year comprehensive school was passed by Finnish Parliament on July 28, 1968. The act will come into force on August 1, 1970. A framework for the school system will be formed by municipal school systems, each of which will consist of a comprehensive school that is intended for compulsory education and may include a kindergarten or corresponding pre-primary classes, of senior secondary school, and of vocational schools based on the comprehensive school course.

The municipality is responsible for the organization of the comprehensive school education (as it was previously responsible for primary schools). For this purpose it receives financial aid from the State. By a date to be decreed by the Government, each particular municipality has to establish a municipal school system in accordance with the School System Act. This will take place in conformity with the plans for execution confirmed by the Government, so that the school system will be operative in all municipalities before 1980. Instruction is to be provided for the three lowest age groups from the beginning, and in each of the following years for one additional age group.

The new school unites the former primary school proper, the civic school and the junior secondary school into a nine-year comprehensive school offering general basic education. At the lower level consisting of six grades all pupils receive essentially the same kind of education. At the upper level the pupils are taught subjects common to all, but they can choose between different courses, and there are also optional subjects.

The act on the comprehensive school was not passed and accepted without criticism. The comprehensive school, as an idea, had been discussed since the 1920s, and in many respects the discussions resembled the debate in newspapers and in Parliament about the introduction of compulsory education and they even had a similarity to the heated arguments about the usefulness and value of popular education *per se* in the middle of the 19th century. There were financial considerations speaking against the reform, it was maintained, and particularly the educational premises on which the new school system was based were questioned. Not only the creation of more equitable educational opportunities, but an appropriate total reform of the educational system of the country was at issue. As far as the latter aspect is concerned the school providing compulsory education naturally occupies a crucial position. The rapidly growing demand for education requires a flexible school organization – a system that, rather than leading to the blind alleys mentioned above, will provide the pupil with an individualized but not excessively specialized general education.

The most important task of the comprehensive school is to offer material and stimuli for the development of the

pupil's whole personality. The junior secondary school of today stimulates, above all, the pupils' intellectual development. The comprehensive school should devote attention more evenly to the pupil's whole personality and its various aspects: human biology, ethical and social objectives, manual work and practical skills.

Intellectual education should be based on the pupil's natural development. Education should for the most part be such as to make the pupil acquainted with the important problems of human environment and culture. As soon as this objective has been achieved, the centre of emphasis should be shifted from a knowledge of relatively unconnected factual data to the mastery of larger units, to the analysis of connections and to the kind of logical thinking needed for problem solving. School education should be transformed so that pupils themselves would take on greater responsibility for the acquisition of knowledge. The teacher should show them the various sources of information and methods of gaining knowledge and create possibilities for the pupils to acquire knowledge actively, both in team work and by working alone. In this process the use of reference works is not important in itself – but the "learning to learn" is. The essential factors involved in this process are the ability to form new concepts – abstract concepts – and increasingly complex networks and hierarchies of concepts and the ability to think logically.

In the development of personality attention should be given to the aspect of mental health. The objective should be to remove general anxiety and lack of balance. Factors causing anxiety at school should be minimized, and pupil assessment should deal with the performance and behaviour of

the pupil, not with the pupil himself – not with his personality as a whole (stupid, lazy, does not know the multiplication table).

In the comprehensive school pupils' guidance should be organized systematically. In the lower grades emphasis will be laid on educational guidance (rules of school work, rules of social interaction, so-called "education for good manners"), in the intermediate grades on instructional guidance (study techniques in different subjects, guidance in the choice of subjects) and at the upper level on vocational guidance.

In order to allow for differences between individual pupils, partly educational and partly organizational differentiation will be resorted to. On the lower comprehensive school level teaching will be organized mainly by employing educational differentiation: pupils will be given tasks and exercises that differ with regard to their degree of difficulty, method of solution or number. On the upper level some school subjects will also be taught in this way. Organizational differentiation means that in certain subjects – mainly in mathematics, foreign languages, and in physics and chemistry – there are courses differing in extent and that there are also optional subjects intended, in the first place, to satisfy the interests and abilities of different pupils. Organizational differentiation will only be used on the upper level, and the aim is to create heterogeneous teaching groups so that traditional class teaching methods can be used.

The organization of language teaching has been one of the most complicated questions associated with the reform. The State committee that first framed plans for the new

comprehensive school suggested that *one* foreign language (either the other national language, i.e. Swedish/Finnish, or English) should be taught to all pupils. The choice would have been made by the municipality in the case of smaller school units, whereas in schools (municipalities) where both languages could be taught it would have been up to the pupil's parents to choose between them. As Finland is a bilingual country and as a knowledge of both the other national language and English (or another international language) was considered to be important, the Education Act, as passed by Parliament, stipulated that the comprehensive school curriculum was to include *two* obligatory foreign languages.

This decision has been criticized a great deal, especially on educational grounds but also because it has been claimed that languages are going to occupy an excessively prominent position in the curriculum. The decision was based particularly on arguments emphasizing the importance of preserving and developing the knowledge of Swedish in Finland. Under the new law, the municipality and pupils' parents still have scope for choice, in that the order in which the two languages will be taught is not fixed; neither are the smaller municipalities obliged to arrange instruction in both languages from the beginning. The teaching of the first language starts in the third grade and that of the second language in the seventh grade.

THE COMPREHENSIVE SCHOOL EXPERIMENT

As the comprehensive school differs in many respects from the present school system, it was important to find out what problems would be encountered in the introduction of the new school type. Comprehensive school experiments have been going on already for ten years, but in the autumn of 1967, eleven schools with upper level grades began to follow a tentative comprehensive school curriculum. The next autumn a further seven schools began to participate in the experiment and in the autumn of 1969 there were 26 schools with upper level grades with about 5600 pupils participating in it.

When pupils pass from the sixth grade to the upper level, studies become more individualized and they have to make a choice concerning the study programme. Every pupil is permitted to decide, together with his parents, upon the subjects and courses he will take. This is explicitly decreed in the School System Act. Under this act, the pupil's parents, after receiving the necessary information given by the school on the pupil's ability and qualifications, are allowed to choose the courses and subjects the pupils will study on the upper level of the comprehensive school. The results of the experiment have revealed that parents make fairly reliable choices. This is shown, among other things, by the distribution of pupils between different courses. In those subjects where there are three different courses the distribution of the pupils has been such that about 50 per cent of them have chosen the intermediate course, about 25 per cent the short course and another 25 per cent the extensive course. This is what the Curriculum Committee expected. Initially it was feared that

parents might choose too many extensive courses for their children, and this seemed all the more likely as every year numerous children not qualified for the study of theoretical subjects enter the secondary school. This did not happen, however. In Norway, by contrast, where the school system is similar to that in Finland, that which was anticipated to take place in Finland did happen. The school systems of these two countries differ, however, in the following respect: In Norway only those who have chosen the extensive course can continue their studies in the senior secondary school, whereas in Finland those who have chosen the intermediate course may also pass on to senior secondary schools. Information yielded by school achievement tests on pupils' abilities is necessary to find out whether they have chosen the right courses.

All choices are independent of one another. This fact, in combination with the abundance of choices, raised doubts as to whether the problems related to the time table of the school could be solved satisfactorily.

The view of the advocates of the comprehensive school on pupils' abilities differs from the opinion expressed, for example, by the proponents of the parallel school system, in that the former maintain that pupils differ from one another in different ways. The traditional school has held that, as a rule, pupils either have talent for all kinds of theoretical studies, or then they have no talent for any theoretical studies. The results of the experiment have clearly shown this to be an erroneous belief. Pupils have generally chosen different courses in mathematics and in foreign languages. For example, the choices of one-third of the pupils in the first foreign language differed from their choices in mathematics,

in some cases quite considerably. The independence of choices has apparently been wellcome to the pupils at least.

The supporters of the traditional school were also doubtful regarding parents' ability to choose study programmes for their children. It was thought that mistaken choices would necessitate many revisions of choices every year, and this would further complicate the planning of the time tables. Experience has shown, however, that this fear was ill-founded. Pupils have had to rectify their mistaken choices, it is true, and to replace a higher course by a lower one, and *vice versa*. Yet this must be considered in itself a positive feature about the comprehensive school. It is important to point out, however, that the number of changes of courses has been so small that no problems have been produced by them.

One of the aims of the comprehensive school has been to decrease grade repeating and the frequency of poor marks. The results of the experiment show that certain measures can help to solve this problem, which is very difficult particularly in the secondary school. No more than 1 per cent of the pupils in the comprehensive school have indeed been kept in the same grade for two years. In the secondary school the number of such pupils has been ten times as large. Also, the frequency of poor marks in the comprehensive school has been reduced to a quarter of their frequency in the secondary school. This has been due to three parallel measures:

1) in the so-called "difficult" subjects pupils are allowed to choose courses where the level of aspiration corresponds to their level of achievement. This also helps to motivate pupils.

2) Pupils who have temporary difficulties in learning are given supplementary instruction in their mother tongue, mathematics and foreign languages. The lack of suitable material makes it difficult, however, to give such instruction. Supplementary instruction will later be better able to serve its purposes.

3) Pupils are allowed to shift from one course to another even in the middle of the term. Moreover, at the end of the term they are also allowed to move to a lower level course, so that they can get a sufficient mark. This right has been made use of in 50 per cent of those cases where a poor mark level course has been impending.

Attention in the comprehensive school experiment has so far been paid mainly to problems related to the organization of instruction. Results which have been clearly favourable can be seen in the sections dealing with the choice of study programmes, the choice of level courses and marking. On the other hand, little attention has been paid to the development of the educational contents and methods of instruction. It seems likely that much remains to be done if the objectives of the comprehensive school in the individualization of teaching and in the adaptation of the contents of teaching are to be achieved. During the school year 1969–70 attention has been focused on these issues. Next year a new curriculum will be introduced and more and better teaching methods will be available. (Then, perhaps, those problems can be solved in a few years' time.)

On the whole, introduction in the comprehensive school is advancing satisfactorily. Yet the mere fact that in the future primary education in Finland will be organized on the

basis of a comprehensive school is not enough; there are still unsolved problems, several of which are due to the great geographical and social differentations of the country. For example, 58 per cent of all primary schools in Finland have only one or two teachers. This is mainly because of the sparsely populated municipalities where the age groups of a single village are often not large enough for a proper school of reasonable size.

The thoroughgoing reform of the whole educational system of Finland has been mainly concentrated on the traditional, already existing forms and institutions of education. Due to the fact that compulsory education in Finland, as in all the other Scandinavian countries, starts only at the age of seven, a need for organized pre-school education has been considered especially necessary. The number of available pre-school places has, however, been wholly inadequate; there is only space for 10 per cent of the total of six-year-old children.

The Education Act of 1968 permits the including of pre-school classes or kindergartens in the municipal school system, and reports on the pre-school experiments carried out show very favourable results in this respect.

The most important task of pre-school education is to reduce developmental differences between children that are related to different backgrounds. The educational method used so far in cases of slow development has been very often the postponement of school attendance. Educationally, this is an inappropriate method, and problems of slow development, which are mostly related to environment differences, can be very often solved through adequate pre-school instruction.

The extension of compulsory education (which lasts eight years today and nine years after the introduction of the comprehensive school) by an additional year has been discussed, and it is unanimously held that this could be achieved at present only by lowering the age when the school attendance begins. This of course presents financial problems, but it is at the same time a long-range goal of organized pre-school education. However, the plans of today deal exclusively with the extension and development of the existing pre-school institutions and kindergartens. For the present the only practical solution would be to increase co-operation between the lower level of the new comprehensive school and the pre-schools. This is so for financial reasons and because of the present shortage of teachers. Intense co-operation will, on the other hand, probably result in the introduction of a well-established pre-school system, which the Finnish educational system has not included hitherto.

The influences of the comprehensive school reform will be felt everywhere in the sphere of education. However, its effects will be most notable in certain branches of secondary-level education, and it will especially influence the various forms of vocational education and adult education (see the chapter on Vocational Education and Adult Education). The reform and its consequences will leave the senior secondary school comparatively intact as far as the basic training given to those attending it is concerned, whereas the role of this school type will be considerably altered. Owing to the parallel school system the senior secondary school has been the most highly esteemed type of secondary level educational institution in Finland (although only about one quarter of each age

group has gone to it). It has in fact overshadowed all the other school forms both practically, in what concerns further educational possibilities, and particularly as regards general appreciation.

The plans for the new senior secondary school emphasize the general cultural aspects and the nature of this school. The senior secondary school will preserve its previous nature, comparable to that of the educational institutions elsewhere in the world; it is not supposed to prepare its pupils for any specialized profession. Therefore, the State committee that has been framing the general plans for reform does not also accept the idea of a separate vocational senior secondary school that would try to give its pupils both the kind of general education provided by ordinary schools and the kind of occupational training offered by vocational schools. The committee feels that these two forms of schooling cannot be combined in this way. It holds, instead, that the idea underlying the "vocational secondary school" – a freer access to higher education as combined with the requirements of vocational training – can be realized by other means, namely, by providing pupils with reasonable possibilities to move both in the "vertical" and the "lateral" directions. This is to say that the admission of pupils of vocational and other corresponding schools to higher educational institutions, and changes from one secondary-level institution to another, should be made possible and should be facilitated by giving these pupils an opportunity to pass supplementary examinations in the necessary subjects. The committee lays particular emphasis on the importance of the arrangement of special examinations in which not only the body of knowledge of the candidates,

who have completed, say, a vocational school or college, but also their maturity is taken into consideration.

The matriculation examination has so far been, as a rule, a necessary condition of admittance to higher educational institutions. This examination is organized centrally for all schools by a special board under the supervision of the Ministry of Education.

A number of plans exist for a revision of the matriculation examination, but none of them can be considered final for the moment. According to one proposal, the examination should totally be abolished and replaced by normal school-leaving examinations and special university entrance examinations (similar to those already used by most Finnish institutions of higher education). A State committee appointed to consider the matriculation examination system only proposed its further development. On the other hand, a committee appointed to deal with problems related to the new senior secondary school considered it possible either to abolish the present system altogether or to replace it by another system of examinations, which would differ from the present one particularly in the sense that it would not be open exclusively to senior secondary school pupils.

The proposals made by the Senior Secondary School Committee have to be seen as a part of the total reform of the present system. As discussed above the demand for a more flexible and less senior-secondary-school-centred educational system requires changes on all levels, and thus, also in the present matriculation examination.

The prospective alterations in the university entrance examinations, like all other reforms planned or carried out,

reflect the basic change that the comprehensive school reform will bring with it. Almost all the plans and reforms described in this booklet can be regarded as derivatives of this one reform. With this we do not want to say that Finland is carrying out some kind of a final moulding of its educational system – far from it; the comprehensive school constitutes just the beginning and the basis as the problems discussed in this passage and the next ones show.

VOCATIONAL EDUCATION

In Finland, as elsewhere, the need for vocational education is as old as are industrial and handicraft occupations. The early forms of vocational education were closely linked up to the guild system, and it was only later that schools were founded to meet the requirements of developing industry. The present institutions have their origin in the various types of vocational schools founded around the middle of the last century. Initially the vocational education given was exclusively intended to serve the needs of handicraft occupations and certain manufacturing industries, and a differentiation according to various levels and needs took place only later.

The most significant step toward the development of modern vocational education in Finland was taken when the 1939 Act on Institutions for Vocational Education was passed. The most important provisions of this act included the one according to which the State's support for these institutions was to be 65 per cent of their total annual expenditures. For the foundation and extending of workshops the share of State aid was 75 per cent. This support was payable to vocational schools and colleges founded by the permission of the Government.

This promising development was interrupted by the Second World War: the coming into force of the act was postponed, and this greatly reduced the possibilities of the municipalities to establish institutions for vocational education, as State support for this was not available. Nevertheless, a foundation had been laid for a sufficient and appropriate network of institutions for vocational education in Finland. To be able to meet her war reparations (in the peace treaties of 1944 and 1947 it was agreed that Finland had to deliver to the Soviet Union war reparation products amounting to 300 million gold dollars within six, later extended to eight, years) obligations, which consisted mainly of deliveries of high-quality manufacturing products, Finland had to expand her manufacturing industries strongly and, in consequence, to develop vocational education as well. The need for vocational education was urgent, and initially special vocational-training courses were arranged to meet it; vocational education in the form of short training courses was also given to men released from military service.

The post-war situation clearly indicated that, in order to satisfy the demand for skilled labour in the sparsely populated parts of the country and generally in the countryside, efforts had to be made for the creation of a network of regional vocational schools. A system according to which each municipality would be obliged to create and maintain a specified minimum number of pupil places for vocational education was also regarded as necessary.

The "Ten-year Plan for the Development of Vocational Education", approved in 1947, included these ideas. It also included a proposal for the founding of a special training

institute for vocational school teachers, and the view was expressed in it that it was imperative to increase student places both in technical schools and colleges and in commercial schools and colleges. A proposal for a new vocational schools act was given by the Government to Parliament early in the 1950s, but it did not come into force until 1959. The act introduced a number of reforms, and in particular, the demands expressed in the above-mentioned plan had been taken into account in it.

Under this act, each municipality was obliged to reserve student places in a general vocational school. In the case of rural municipalities the number of student places was to be such that at least one new student per 1000 inhabitants could be admitted annually. The corresponding ratio for small towns with 20,000 inhabitants or less was 3 per 1000 and, for larger towns, 4.5 per 1000 inhabitants a year. The numbers of student places provided for under the act were in 1960 as follows:

rural municipalities	(2,776,000 inh.)	ca.	2,700 places
small towns	(438,700 inh.)	"	1,300 "
large towns	(1,238,500 inh.)	"	5,500 "
			9,500 places

The corresponding figures for 1969 were as follows (note the relative increase in the population of towns):

rural municipalities	(2,361,200 inh.)	ca.	2,100 places
small towns	(495,400 inh.)	"	1,400 "
large towns	(1,822,300 inh.)	"	8,100 "
			11,600 places

Development has been rapid and both the problems and educational bottlenecks of today are entirely different to those of the 1950s. Regional differences are very considerable in Finland, and in consequence, the schooling conditions prevailing in the remote parts of the country cannot be regarded as satisfactory; this applies to vocational as well as to other schools, and particular attention is therefore being continually paid to the so-called developing regions of the country in increasing the vocational education facilities also. Another important point is the constantly increasing need for re-education and in-service and other further education in a society where the process of industrialization is going on. A further important task is to provide those age groups and sections of the population with vocational education that have remained without it for one reason or another, especially in the absence of opportunities.

The foundation on which vocational education rests in Finland consists of so-called *general vocational schools*, which the municipalities are obliged to establish and maintain under the above-mentioned act. These are generally schools with a two-year or three-year course. During the first year about 50 per cent of instruction in these schools is theoretical, another 50 per cent consisting of instruction of work. During the second year the latter accounts for 60 per cent and, during the third year, for 75 to 85 per cent. Admission to these schools presupposes completion of the compulsory school course and the passing of an entrance examination including tests mainly in the applicant's native tongue and mathematics. At least the following seven occupational fields are to be represented in each general vocational school: metal work,

machine reparation, electricity, wood work, building and construction, clothing and foods.

An extensive network of municipal and private vocational schools has come into being. One of the most apparent weaknesses of this line of development has been, however, that the developing regions of the country have not been covered by it even tolerably well. The state of affairs can be expected to improve in this respect, however, as a Government bill was enacted by Parliament in December 1969 in which particular emphasis was placed on the satisfaction of the special needs of young people in the developing regions of the country. The central vocational achools differ from the general vocational schools mainly in two respects: the number of subjects in which, and the number of occupations for which, training is given is larger than in the general vocational schools, and there is more scope for choice. As the central vocational schools are intended to serve the whole country, they have been made to include fields of study not covered by the curricula of the general vocational schools, which are only meant to meet the needs of a particular economic region each.

By the end of 1969 there were eight central vocational schools in Finland; the general vocational schools run by inter-municipal authorities numbered 54 and those run by individual municipalities 21; special vocational schools (including those of private industrial undertakings) numbered 44, and there were 10 vocational schools for handicrafts and service industries, 9 vocational schools meant for the disabled and the sensorily deprived, and 21 other vocational schools.

Thus, there was a total of 168 vocational schools, with a total enrolment of 42,749 students.

The range of institutions providing vocational education in Finland is wide, partly as a result of historical developments but also because of the intrinsically multi-dimensional character of the field.

Apart from the vocational schools considered above, there are vocational colleges, admitting students who have completed the junior secondary school course and preparing them for particular occupations (e.g. the Aviation College of Finnair, the Dental Technicians College and the Opticians College).

Preparation for various *public health and nursing services* also takes place in institutions for vocational education. There are training schools and training colleges for nurses. Admission to the former presupposes the completed compulsory school course; the junior secondary school is sufficient for the latter, but a considerable proportion of the present students of these training colleges have passed the matriculation examination. The examinations that may be taken in the former include those of assistant and mental-hospital nurses, whereas the latter prepare their students for general-hospital nursing and for a variety of specialized nursing services. It takes 2 or 3 semesters to graduate from a nursing school and 5 semesters from a nursing college. The training schools and colleges for nurses have at present a total enrolment of 7,353.

In Finland the education intended to meet the needs of industry and commerce takes place within institutions of technical and commercial education.

The *institutions for technical education* are either technical schools or technical colleges.

The *technical schools* provide training to prospective technicians, who may be employed as planners or designers, draftsmen, foremen, etc. The prerequisites of admission include the completed compulsory school course, 24 months' practical training in the field concerned and the passing of an entrance examination. The courses of these schools last three years. However, if the applicant has completed the junior secondary school or general vocational school course, the requisite period of practical training is only 0 to 12 months; thus it would be appropriate for the general vocational school to become the basic school for technical schools.

Technical colleges graduate engineers for more exacting design, production and supervisory tasks. The prerequisites of entrance include the completed junior secondary school course and 16 months' practical training, or at least satisfactorily passed technician's examination. The course of technical colleges last four years. Many of the applicants to technical colleges have passed the matriculation examination. Therefore, several of these colleges have established special classes for those who have taken this examination; the students in these classes graduate in three years, and only 12 months' practical pre-admission training is necessary for them.

Correspondingly, there are both commercial schools and commercial colleges. The *commercial schools* are educational institutions with a two-year course, preparing their students mainly for the less demanding posts in business and commerce. Admission to these schools presupposes completion of the compulsory school course.

To gain entrance to a *commercial college*, the applicant must have completed the junior secondary school or the commercial school course. The commercial college course lasts two years. Like technical colleges, the commercial colleges have special classes for those who have taken the matriculation examination; only one year's studies are required of these students.

In December 1969 the Government submitted to Parliament a proposal for a new act concerning commercial education. According to this proposal, the course of the commercial colleges would last 3 years; only a two-year course would, however, be necessary for those who have passed the matriculation examination.

In the autumn of 1969 there were 15 technical colleges in Finland, with a total enrolment of 6,613, and 27 technical schools, with a total enrolment of 8,380. The commercial colleges numbered 59 and had a total enrolment of 10,488, and there were 76 commercial schools with a total enrolment of 8,404.

Today the education given in home economics and home handicrafts is subordinated to the National Board of Vocational Schools. During the autumn term of 1969, a total of 5,673 students were pursuing studies at the (78) various-level non-academic institutes for home economics, with courses of 1 to 4 years. The institutes for home handicrafts (92) had a total enrolment of 2,723 students; the courses of these educational institutions generally lasted one year.

Thus, there are numerous institutions of various types in Finland coming within the scope of vocational education. Administratively they are subordinated to the Ministry of

Education and to the National Board of Vocational Education. An exception is provided only by the institutions providing training in agriculture and forestry, which are subordinated to the Ministry of Agriculture.

Vocational education expanded almost explosively in all fields in Finland during the 1960s. In the years 1950–1968 some 250,000 persons were freed from agriculture to be engaged in other productive activities, at the same time that some 300,000 new jobs were created particularly as a result of the vigorious growth of the service industries.

Despite the strong development of industrial occupations, nearly a quarter of the population of Finland still gains their living from agriculture and forestry. The labour force reserve engaged on these sectors, which resides largely in the so-called developing regions of the country, cannot be employed efficiently unless the industrial sectors of the Finnish economy expand vigoriously enough, and this in turn presupposes that vocational education be developed strongly and appropriately and that investment in it be increased. Although the vocational education provided in most fields has already reached sufficient dimensions quantitatively, it is still necessary to increase the opportunities to receive such education particularly in the developing areas of Finland. In the southern parts of the country it has been possible to admit about 60 per cent of applicants to vocational schools. In Helsinki the number of applicants has been considerably lower than the number of available student places; in the developing regions of the country, by contrast, it has been possible to admit only 25 to 30 per cent of the applicants. The corresponding average proportion for the whole country has been 43 per

cent. According to the plans framed by the National Board of Vocational Education, the numbers admitted to these educational institutions will rise by about 42 per cent in the developing areas of Finland over the next five years: in the rest of the country the corresponding increase will be approximately 8 per cent, and it will average about 16 per cent for the whole country. This anticipated development – in combination with the considerable decrease in the size of age groups – is likely to be sufficient to rectify the uneven regional distribution of opportunities for vocational education.

The development of vocational education implies not only that the number of student places should be increased but also that the needs of industry and commerce should be taken into account thereby. For example, there is constant shortage of skilled metal workers in Finland at present, which is due in part to an insufficient schooling capacity but also in part to the emigration of skilled metal workers to Sweden.

The development of the *apprenticeship agreement system* under the 1968 revision of the relevant legislation opened up new vistas for vocational education. This type of vocational training is particularly important in fields where vocational education cannot be given in school-like forms.

Although the distribution of student places is uneven both regionally and among various occupations, the present capacity of the Finnish vocational education system is sufficient, in principle, to ensure every student two years of further education. However, it will perhaps take still a few years before this is the case also in practice. According to an estimate made by the National Board of Vocational Education in 1974 a total of some 32,000 students will be admitted to

vocational schools in Finland (including those admitted to the apprenticeship agreement programmes) or about 84 per cent of the estimated total applicants. This can be regarded as sufficient, considering that there are individual differences in fitness and other factors limiting the number of those actually admitted. The estimated total admissions will be about 52 per cent greater than in 1969.

As was already mentioned, *vocational courses* have also been arranged in Finland systematically since the Second World War, with the object of providing the greatest possible number of people with basic vocational education. Such courses have been arranged continually, and they have proved particularly important as a means of combating unemployment and of providing those age groups with vocational education that did not yet have an opportunity to receive such in their youth. The experiences gained of vocational courses have generally been favourable, and therefore the employment course system was brought to a legal basis in 1965. The courses concerned may be either basic, supplementary or re-training courses; they are all financed entirely out of State funds and no fees are charged on the participants.

The fact that unemployment figures have at times been exceptionally high in Finland is due to a large extent to certain structural characteristics of the population; thus, there may be notable unemployment at the same time that certain productive sectors and fields suffer from a shortage of labour. International investigations (OECD) suggest that, in order to be of significance for manpower policy, the number of those to be re-trained must be at least 1 per cent of the total labour

force. This implies that some 20,000 persons should be re-trained in Finland annually. In recent years the figure has, however, been only about 5,000 and in 1969 it was about 7,000. For the organization of re-training to be appropriate, an extensive network of course centers, similar to those organized in other countries, should be created in Finland; at present the creation of such a network is still in its initial phase.

The building of the network of vocational schools proper, meant for young people, will be completed within a few years. Attention in the development of vocational education should now be focused mainly on improving the quality of instruction and, above all, on re-training and further education. Thus, the centre of emphasis will shift to a considerable degree from the education of young people to adult education.

The most important reform in the administration of education in Finland is beyond doubt the creation of the comprehensive school. Its ifluences will be perceptible in all fields of education, not least in vocational education.

After the reform has been completed, the starting point for all secondary-level studies will be the same, i.e. the comprehensive school course. In the vocational school curricula its effect will be felt mainly in the instruction of general subjects, in that the syllabi for those can in the future be based on the corresponding comprehensive school syllabi. In consequence, more advanced levels than hitherto may be attained in these subjects, too, even though the numbers of hours devoted to them remained the same.

One of the practical goals of the overall reform of the administration of education in Finland is to make the Finnish school system increasingly flexible and to link the various school levels more closely and appropriately with one another. As was already pointed out, particularly the various fields of vocational education have suffered from the disproportionate emphasis so far placed on the senior secondary school and the present junior secondary school. The reform of secondary-level or so-called youth-level education that will be a logical consequence of the comprehensive school reform is intended to remove or reduce these drawbacks, since it will not be confined exclusively to the senior secondary school.

The *schooling-level* principle inherent in the reform of the Finnish administration of education implies the acceptance of freer combinations than hitherto and wider opportunities for people to make use of the schooling they have previously received. In the case of secondary-level education this means mainly that it will also be possible for those who have not completed the senior secondary school to pursue studies in tertiary-level educational institutions. As has been stated in previous chapters, the general goal is to get rid of what we have called educational blind alleys: it should be possible, in principle, for every student to go on to tertiary-level institutions, regardless of the type of secondary-level school course he has completed. Problems will of course be encountered in cases where the student, after completing the course of a school providing training for a particular occupation, wants to continue his studies at a university. Additional studies will then be necessary, and the Senior Secondary School Committee, which has considered the matter, has

devoted attention to this point. It feels that opportunities for additional and supplementary studies should be increased and that, above all, previous studies and particularly the maturity gained in this way should be taken into consideration. The requisite supplementary studies should take place at the secondary-level school concerned, and these should be obliged to organize special programmes for those who wish to complete the senior secondary school course on, for instance, a vocational school basis.

In considering how secondary-level and tertiary-level education should be linked the Committee adopted the view that both the senior secondary school of the present kind and vocational schools should be preserved and that no special vocational secondary schools should be created. The Committee also emphasized that it ought to be possible for the students of any type of secondary-level school to continue their studies in universities and other university-level educational institutions. The Committee felt, in particular, that the already existing opportunities to pass from technical and commercial colleges to the corresponding university-level institutions for higher education should be improved.

HIGHER EDUCATION

There have been two phases of vigorous expansion on the development of the Finnish system of higher education. The first was experienced during the early decades of this century. The second one – mainly regional in character – began some ten years ago and has not yet come to an end.

After the University of Turku had been transferred to Helsinki early in the nineteenth century, Helsinki remained the only university town in Finland until the dawn of her independence. For the university students of last century it was possible to pursue studies only in one or another of the four traditional faculties, i.e., those of theology, law, medicine and philosophy. The range of choices widened when university-level teaching of physical education was begun in 1882 and when instruction in subjects taught at present in the faculty of agricultural and forestry sciences was started in 1898.

The second university-level institution for higher education in Finland developed gradually from the Technical School of Helsinki, which became the Technical University of Helsinki in 1908. The first university-level institution for

commercial studies, the Helsinki School of Economics, was founded three years later.

During the first decade of independence (1917–1927) particularly Swedish-language higher education developed vigorously, but a further noteworthy point was that university-level education also began outside Helsinki, namely, in Turku. Two universities, the Swedish-language Åbo Academy and the Finnish-language University of Turku, and two university-level institutions for commercial education, the Swedish School of Economics in Helsinki and the Swedish School of Economics in Turku, were founded during this period (all four were established on the initiative of private citizens). Jyväskylä became the third town in Finland with a higher educational institution in the 1930s, when the Jyväskylä Teachers College (from 1967, the University of Jyväskylä) was founded. The Helsinki School of Veterinary Medicine and the Finnish-language Turku School of Economics were founded in the 1940s, instruction at the University of Oulu began in 1959 and the School of social Sciences, founded in 1925 in Helsinki and transferred to Tampere in 1960, became the University of Tampere in 1966.

As a result of the intense interest felt in the development of higher education in the late 1950s and during the 1960s, five new university-level institutions of higher education were decided to be founded, four of them in localities that had not previously had higher educational institutions, namely, in Joensuu, Kuopio, Lappeenranta and Vaasa. Instruction has already begun at the Technical Universities of Tampere and Lappeenranta, at the Vaasa School of Economics and the Joensuu University.

The present phase of the expansion of higher education is likely to come to an end when the doors of the seventeenth Finnish institute of higher education, that in Kuopio, open in the mid-1970s. The regional distribution of tertiary-level educational institutions in Finland can then be regarded as fairly satisfactory, and the centre of emphasis will thereafter lie in the inward development of the already existing institutions.

The number of students has increased explosively in all fields of education, but particularly sharply in higher educational institutions, where it more than doubled in the 1960s. In 1960 those who passed the matriculation examination numbered slightly less than 8,000, whereas the corresponding figure was about 18,000 in 1968. It should be noted, however, that not all of those who pass the matriculation examination are any longer automatically admitted to higher educational institutions. According to the present long-term plans, some 60 or 70 per cent of those taking this examination may be admitted to universities and other comparable educational institutions in the future

As early as 1935 a committee was appointed to consider the problems associated with the "excessive" number of those seeking admittance to universities in Finland (at that time, particularly the number of female students was regarded as too large). Today the situation is quite different. It is generally agreed that women have the same right to university-level studies as men, and female students in fact account for about 50 per cent of all university students at present – a proportion that may be the highest in the world. Yet an "overflow" of university students is a fact, and the rise in the

number of those seeking admittance to universities has particularly increased the numbers of students in the so-called "free" faculties (those of the humanities and social sciences), which did not impose any restrictions on the admittance of students until comparatively recently. (In Finland, the Faculty of Medicine at the University of Helsinki was the first one that introduced a numerus clausus system, in 1933).

Development thus "broke loose" and resulted in a disproportionate increase in the number of students of the humanities in comparison with the number of those studying the sciences (a tendency that has been observed almost everywhere in the world), and this has proved inappropriate from the standpoint of the labour market in particular. Especial attention has therefore been devoted in the planning of higher educational institutions to the creation of a fields-of-study distribution that can be considered appropriate.

The development of the system of higher education has, as was already pointed out, decisively altered the regionally determined opportunities for university-level studies. Investigations have in fact revealed that a considerable proportion of the students of the new universities come from the regions surrounding these institutions. Changes in the proportion of the students of higher educational institutions accounted for by the institutions situated in Helsinki reflect the alterations that have taken place in the regional pattern of the opportunities for university-level studies. At the beginning of the 1950s this proportion was still as high as 90 per cent; by the beginning of the 1960s it had fallen to 70 per cent, and at the end of 1967 it was about 60 per cent. According to the existing plans the proportion will continue to diminish, and in

1981 about 45 per cent of all students of higher educational institutions will be studying in Helsinki, about 17 per cent in Turku, about 10 per cent in Oulu and some 8 or 9 per cent in the universities located in eastern Finland. The extent to which southern Finland is still in a more favourable position compared with the other parts of the country as regards higher education is further shown by the fact that, in 1965, about 37 per cent of the students of higher educational institutions came from the Province of Uusimaa (i.e., the province surrounding Helsinki), and students from the regions surrounding Turku and Tampere were also greatly over-represented. On the other hand, the number of students coming from the developing areas of the country in eastern and northern Finland was the lowest in relative terms. Generally speaking, the number of university students in proportion to the relevant age groups declines in the direction from south to north and from west to east.

The efforts in the development of the Finnish system of higher education can roughly be divided into two groups: those made to improve its material prerequisites and those to improve its organization. The classification is almost arbitrary but illustrative. The creation of a supply corresponding to the demand for academically educated manpower may be regarded as the ultimate motive for the material development of the system of higher education, and this presupposes influencing both the weight given to the various fields of study in higher educational institutions and the numbers of students in them. No overall investigation concerning the need for academically educated manpower has so far been carried out in Finland. Nevertheless, the law concerning the development of higher

educational institutions should be seen as an expression of will on the part of society establishing the lines along which these institutions are to be developed. In the development of the organizational aspects, efforts have mainly been concentrated on an extensive democratization of the Finnish system of higher education, a point to which we will return later.

The law concerning the development of higher educational institutions in 1966–81 laid down the minimum amounts by which the annual expenditures of these institutions are to be increased (a majority of the Finnish institutions of higher education are State-owned, and the financial support of the State to the private institutions also covers 70 to 90 per cent of their total expenditure), the minimum number by which the student places are to be increased and the distribution of these places by fields of study. The law also includes stipulations concerning the reduction of the student/teacher ratio in various fields of study and the provision of additional premises for instruction and research. The law is of significance in two respects: it ensures that the financial resources available to the institutions of higher education will be sufficient and, on the other hand, makes continued long-term planning for the development of the system of higher education possible.

The development programme formulated under this law for a fifteen-year period (1967–81) is divided up into five subperiods covering three years each, and it is up to the Government to inform Parliament every three years about its plans regarding increases in the numbers of student places and in teaching staff and about its building projects serving the

purposes of instruction and research in the institutions of higher education.

The minimum target laid down in the law is the creation of 60,000 full-time and half-time student places by 1981, which would correspond to a total of some 75,000 additional student places by that date. At least 25,000 of these will be in the humanities, law and social sciences (including the commercial subjects); at least 15,000 in the natural sciences and agricultural and forestry sciences; and at least 11,000 in technology and 6,000 in medicine. Thus, a total of 52,000 student places are to be created in these fields of study, whereas the remaining 8,000 places form a reserve that may later be assigned to fields where additional places are needed (see Appendix 12). The law does not include more detailed stipulations in this respect, but the final detailed distribution of student places is left to depend upon the decisions of the higher educational institutions concerned and those of the Ministry of Education. It is also up to the Ministry to make recommendations concerning the number of students to be admitted to various faculties. According to the legally established minimum norms and the plans formulated within the framework thus provided, the number of students in higher educational institutions should be increased by an average of 3.6 per cent a year between the autumn of 1967 and the end of 1981. The rate of increase would be slowest, or 1.4 per cent a year on an average, in the humanities and social sciences, and highest in medicine and technology.

One of the most important objects of the law is to improve the student/teacher ratio. As the nature of studies in various fields varies widely, the distribution of costs will be

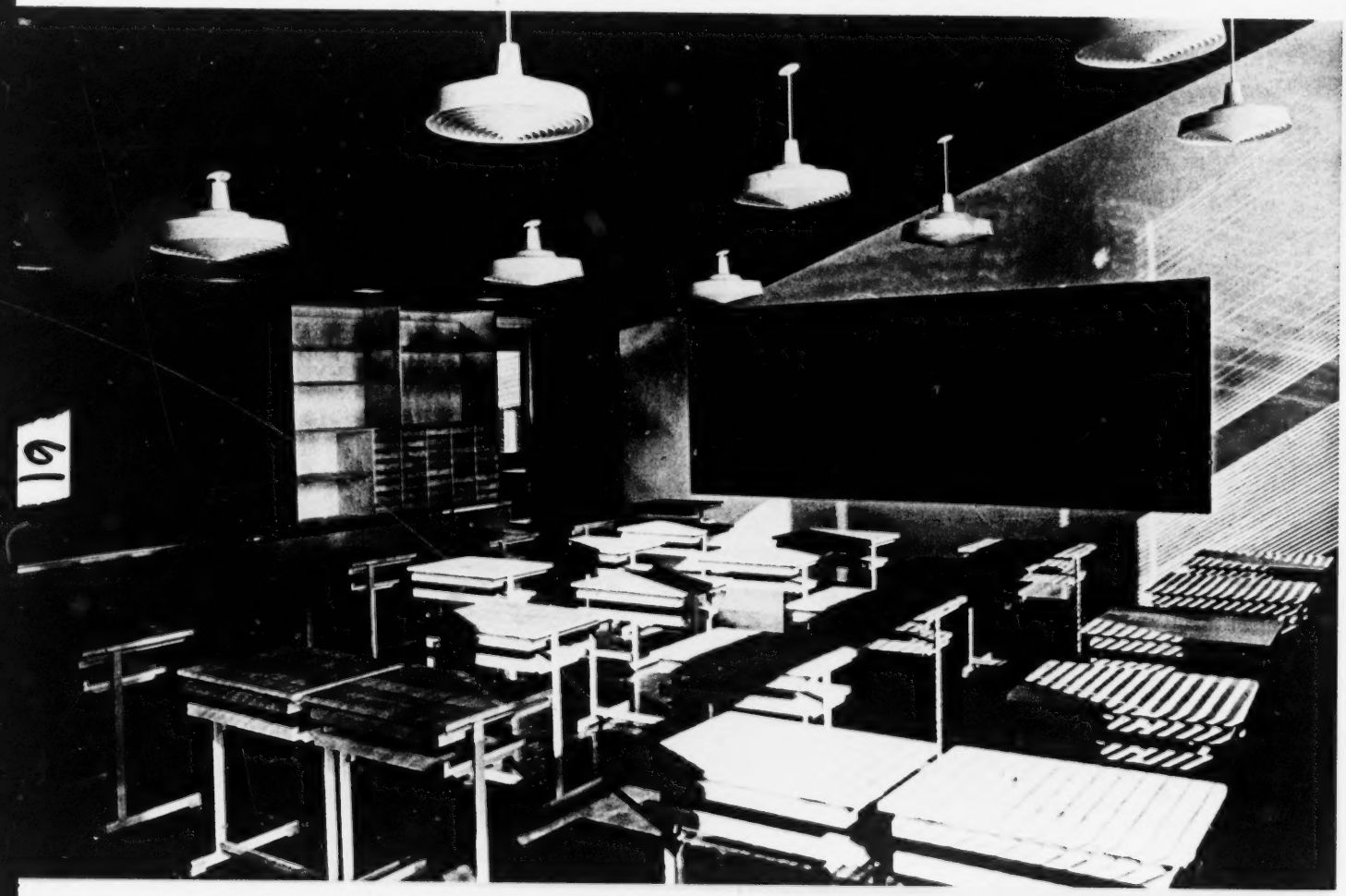
quite uneven; the costs caused to the State by one student (not including investment in buildings) has been calculated to range from 2,000 marks (humanities) to 10,000 marks (medicine) a year. This has clearly been one of the reasons why the various fields of study have expanded unevenly and without a plan, and in consequence, it has also had an impact on the development of the student/teacher ratio. As already stated, achievement of the targets laid down in the development law will result in substantial changes in the weighting of the various fields of study. The following percentage distributions will illustrate these structural changes.

	1938		1966		1981 (target)	
Field of study	Stud.	Te.	Stud.	Te.	Stud.	Te.
Humanities	41.8	53.9	63.5	37.9	48.4	31.7
Sciences	24.0	25.1	19.4	23.6	24.2	31.4
Technology	20.6	13.0	11.2	18.1	17.7	22.0
Medicine	13.6	8.0	5.9	20.4	9.7	14.9

Efforts have also been made to improve the general preconditions of university-level studies. The most important measures under consideration at present include a reform of the examinations system, the development of student selection and its possible centralization (each institution of higher education has so far selected its students separately and independently of other institutions) and the improvement of the social conditions of the students. The existing plans for a reform of the general and internal administration of higher educational institutions, for the organization of summer-time studies and post-graduate studies purport to render university-level studies increasingly efficient. in the sense that they are

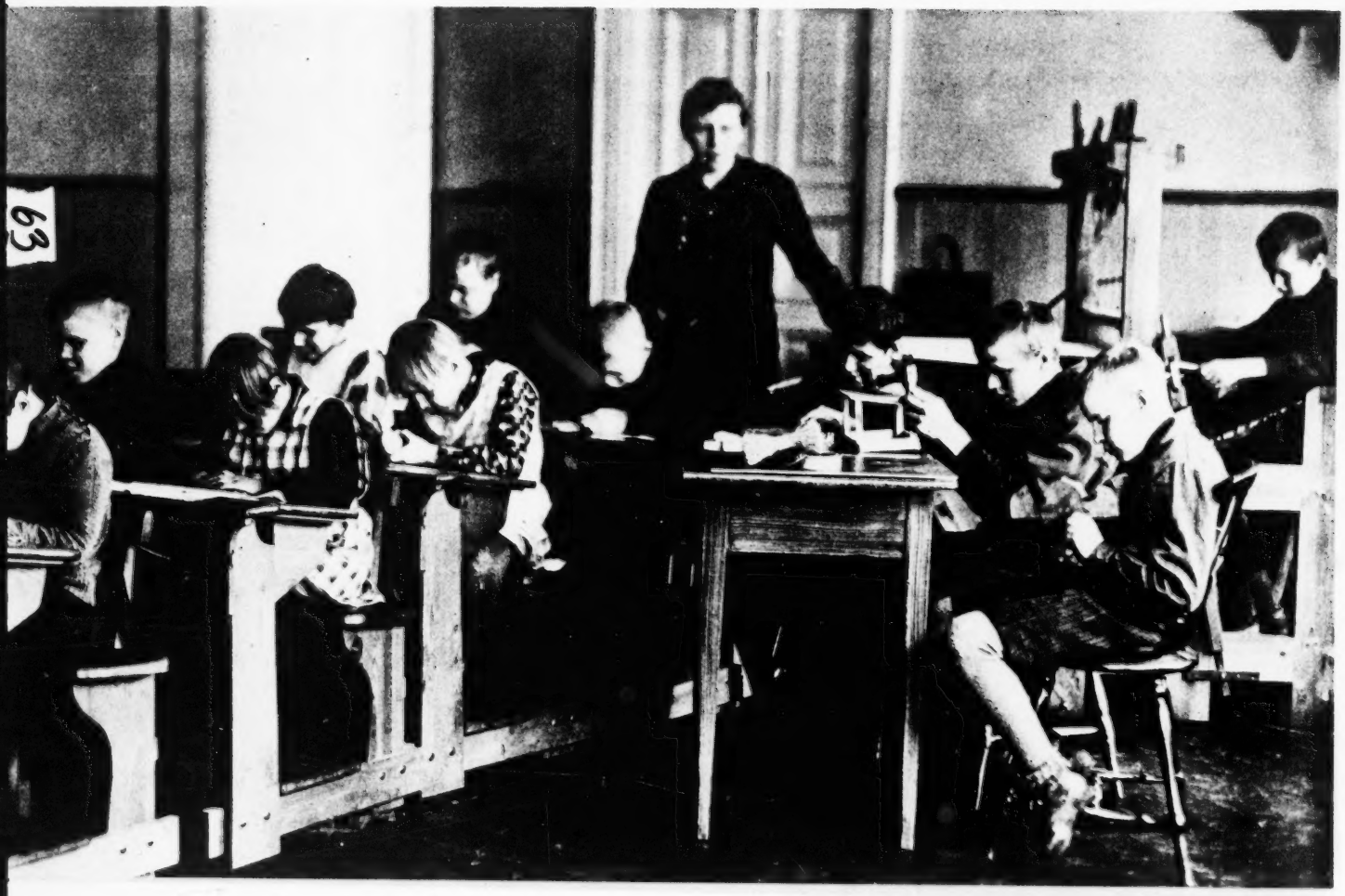
INSTRUCTION IN MATHEMATICS IN THE SECOND FORM OF A PRIMARY SCHOOL.
PRIMARY SCHOOL IN MAUNULA (HELSINKI)

A NEW PRIMARY SCHOOL IN MUNKKIVUORI (HELSINKI)



A PRIMARY SCHOOL IN SAARIJÄRVI BEFORE THE SECOND WORLD WAR

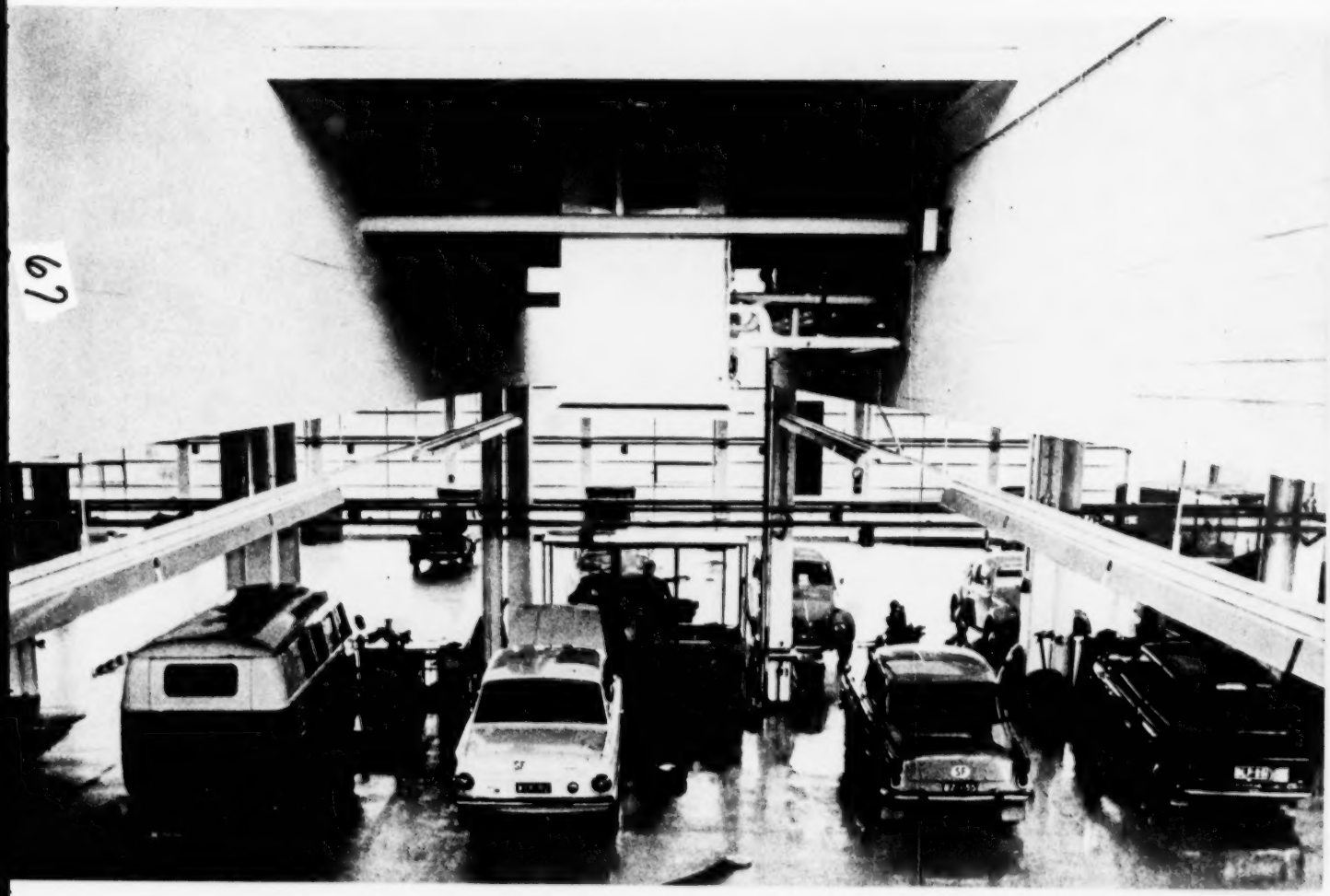
INTERIOR OF THE SAME SCHOOL



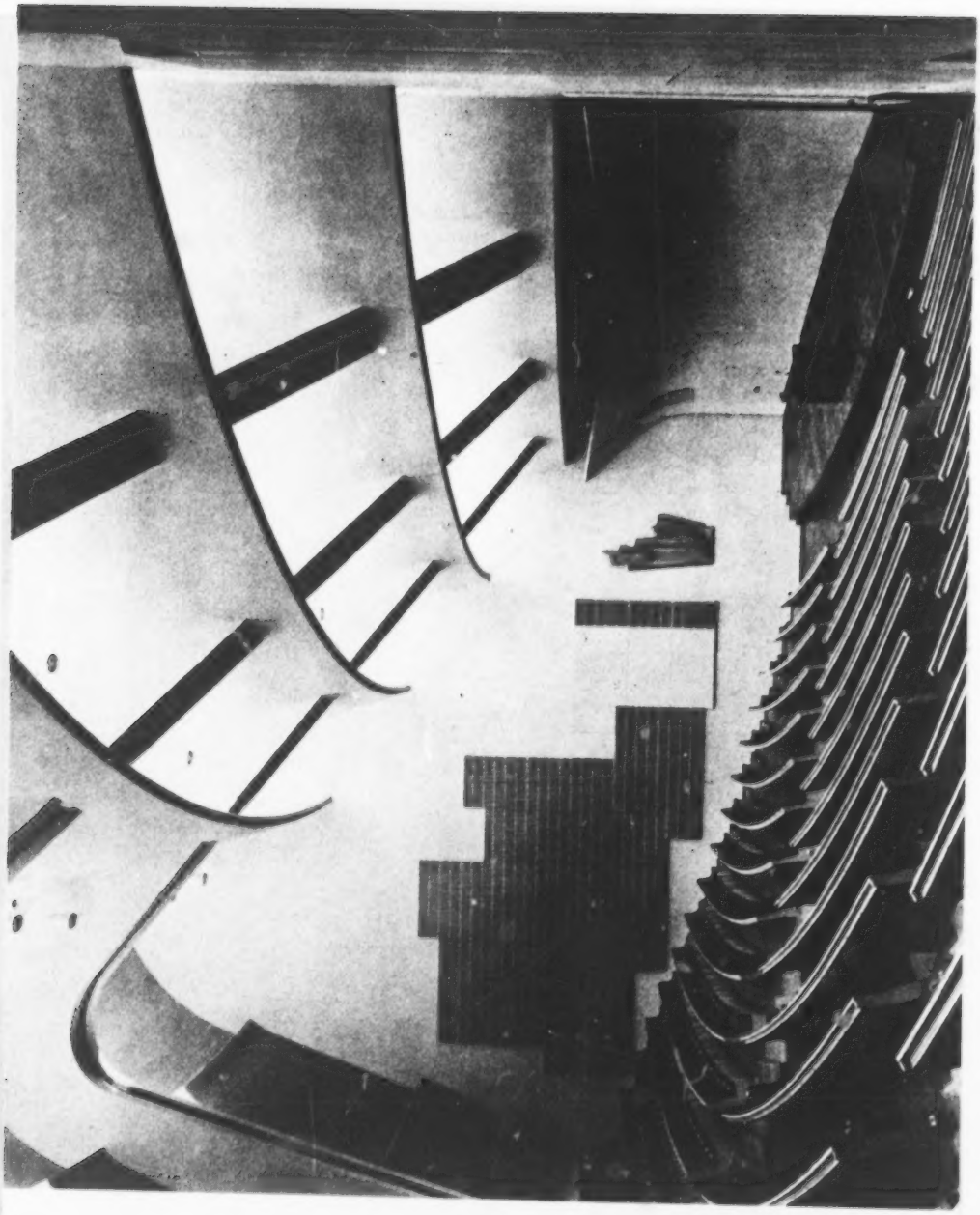
A NEW SECONDARY SCHOOL IN A SUBURB OF HELSINKI (SWEDISH LANGUAGE SECONDARY SCHOOL IN BOTBY)

A LANGUAGE LABORATORY IN A SECONDARY SCHOOL (HELSINKI)

A VOCATIONAL SCHOOL IN HAAGA (HELSINKI), A REPAIR SHOP



STUDENT UNREST IN HELSINKI. THE OCCUPATION OF THE HOUSE OF THE STUDENT UNION OF THE UNIVERSITY OF



THE AUDITORIUM MAXIMUM OF THE TECHNICAL UNIVERSITY OF HELSINKI

STUDENTS WHO HAVE PASSED THE MATRICULATION EXAMINATION
RECEIVE THEIR TRADITIONAL WHITE CAPS

expected to increase the relative number of students pursuing studies on a full-time basis. These reforms will have significant economic consequences; for example, discontinuation of studies is likely to become less frequent and the lengths of time requisite for studies are expected to decrease. The available statistics indicate that (depending on the field of study) some 65 to 90 per cent of those admitted to higher educational institutions take a final degree.

SOCIAL REFORMS AND STUDENT ORGANIZATIONS IN FINLAND

Perhaps the most far-reaching of the reforms that are being implemented in this field in Finland at present is the creation of a system of financial support for all those studying in secondary- and tertiary-level educational institutions. A committee appointed to consider this question recommended that a system covering the average costs of study of all secondary- and tertiary-level students should be developed and be fully operative by the mid-1970s. Half of the financial support payable under this system should consist of scholarships and the other half of easy-term loans. Moreover, a system of so-called guaranty scholarships should be created; these scholarships should cover, fully or in part, the study loans of persons who have passed their degree examinations particularly well.

What is concerned is a reform that is of considerable dimensions financially, and in consequence, its realization is

bound to take time. During the first stage the coverage of the system was limited to tertiary-level students alone, but virtually all students of secondary-level educational institutions will also be covered beginning from the autumn term of 1970. As was already stated, both scholarships (the share of which is the lowest of all for the present) and easy-term loans are granted within the framework of the study support system; the loans are guaranteed by the State and interest subsidies at a rate of 3,5 to 4 per cent are paid on them. At present, the maximum payable study supports (grants plus loans) is 3,500 marks per annum. The right of a student to study support and the amount of the support granted depends both on his earnings and means and on his academic achievements but not, for instance, on his parents' income.

The social problems of Finnish students cannot be solved exclusively by means of the above-mentioned system for the financing of their studies. Their dwelling conditions, for example, are not yet satisfactory, nor is the availability of generally used textbooks in libraries. Contrary to the case in many other countries, the students themselves, rather than universities or society, have assumed responsibility for nearly every kind of indirect study support, such as the building of hostels, the provision of meals, medical and health services and, in part, library services. That student organizations have assumed responsibility for these activities is historically understandable, as in the post-war circumstances – when the building of hostels, for example, was actually started – it was impossible for the State to help students financially. On the other hand, the Finnish student organizations were better furnished than their counterpart organizations in most other

countries to assume financial obligations, as well as to create and develop various social and other service systems for their members.

The range of activities of Finnish student organizations, just as that of student organizations in the other Nordic countries, differs in several respects from that of the corresponding organizations in Central Europe, for instance. The student organizations in the Nordic countries have always been quite independent of the respective universities both financially and in other respects, and this has also enabled them to pursue policies of their own. The political activity of Finnish university students will not be considered here in detail. It should be stated, however, that it is of incontestable significance in Finnish society – and, moreover, that the influence exerted by university students is not only a generally recognized fact but is also approved of and regarded almost entirely as valuable. In consequence, university students have in recent years had their representatives on all important committees that have dealt with the reform of higher educational institutions.

Thus it is comprehensible enough that several of the demands for reforms in the Finnish system of higher education have had their origin in student organizations. Particularly the creation of a study support system and democratization of higher educational institutions have been demanded by various student organizations and the National Union of Finnish Students for several years. The Union has emphasized the great importance of social policy measures in the democratization of university studies and their preconditions, the aim being to have the distribution of university students by

social background correspond to that of the whole population (see Appendix 10). The Union feels that university studies should not be regarded as a privilege for which the student has to pay a price in the form of a reduced standard of living during his university years; what is concerned is right, and it is up to society to ensure that everybody can actually make use of it.

THE REFORM OF UNIVERSITY ADMINISTRATION

The democratization of universities and other higher educational institutions has, however, been the topic that has caused more discussion than any other aspect of the development of higher education in Finland. The problems involved here are far-reaching, and a starting point for the discussion of these problems has been provided by the fact that a reform of university administration has been regarded as imperative for a considerable length of time. University democracy is, however, a concept of a wider scope, and particularly in the discussion initiated by students both the development of legal security and the creation of a freer and more open university have been subsumed under it.

In the Government bill concerning the foundations of the inner administration of higher educational institutions attention was also devoted to legal security. (A particular State committee has been appointed to consider this topic.) Another question raised in this connection is the one concerning the admission to higher educational institutions of persons

who have not taken the matriculation examination. So far only the doors of the technical universities and schools of economics have been open to persons who have not taken the matriculation examination, provided they have passed a corresponding technical or commercial college examination. On the other hand, the matriculation examination has been a necessary condition for admittance to all other higher educational institutions, except in rare cases. The fact that those who have not taken the matriculation examination have done better than the average at higher educational institutions, in combination with the points of view put forward above concerning adult education, speak for a revision of the present practice. A committee appointed for the consideration of the entire problem of student selection has in fact proposed that a specified proportion of the total students to be admitted to any higher educational institution (e.g., a maximum of 5 per cent) be persons who have not taken the matriculation examination. The committee further proposes that particular stipulations be given concerning the selection of such students (through, say, special entrance examinations) and the special requirements to be imposed on such applicants as regards their knowledge of foreign languages or the like. It is not yet known how soon this reform will be realized; nevertheless, as has been stated above, the development of an integrated system of adult education makes it imperative.

The Government bill concerning the foundations of the inner administration of higher educational institutions that was submitted to Parliament was the Government's response to the vehement discussions of past years. The demands for a reform of the administration of higher educational institutions

became topical in the political respect early in 1968, when it turned out that not all of these institutions were prepared to permit either their students or their junior teachers to participate in their administration to a larger extent than previously. The largest university of the country, the University of Helsinki, suggested that students should have two representatives at the Small Consistory (Consistorium Minus, which is the most important governing body of the university and consists at present of the deans and vice-deans of its seven faculties). An experiment with such a system was initiated at the University of Jyväskylä in the same year. On the other hand, the University of Tampere was prepared to introduce a system in which a third of the members of the deciding body would be representatives of students and another third would be representatives of junior teachers, the municipal authorities and business.

A majority of university students still considered the "tripartite" principle (according to which one third of the members of the deciding body should be professors, one third should be junior teachers and one third students) acceptable early in the autumn of 1968. Partly as a result of the inflexible attitudes of the universities and partly in consequence of world-wide student unrest their demands increased, so that the general meeting of the National Union of Finnish Students held in November 1968 accepted the one man – one vote principle by a large majority as the one upon which the reform of university administration should be based.

In July 1968 the Government appointed a committee to formulate a proposal concerning the principles to be observed in the development of the inner administration of higher

educational institutions. The Government emphasized that not only professors but also other teachers and students should be provided with sufficient possibilities for participation in planning and administrative decision-making in all institutions of higher education. Another point to which the Committee had to devote attention was the extent to which the administration of these educational institutions could be decentralized. The Committee completed its work in June 1969, by which date the discussion concerning the reform of university administration had reached an entirely new stage. In the spring of 1969 it had become evident that, even though the stand to be taken by the Committee was not yet known, almost all student organizations were for the one man – one vote principle, whereas professors and the deciding bodies of higher educational institutions were against it. When the Committee submitted its report, where it recommended the one man – one vote principle, an actual "fight" around the administration reform broke out.

That development has been fast and the dispute exceptionally vehement is perhaps best indicated by the rapidity with which the attitudes of the parties concerned have altered. It would seem that still in the autumn of 1968 students would have been quite ready to accept the "tripartite" principle or some modification of it and would have regarded a reform based on it as both democratic and radical; a year later they even refused to discuss such a reform when professors, in turn, made them an offer based on this principle. The same professors who at first had been categorically against the "tripartite" principle supported it unanimously one year later.

The Government bill was based largely on the above-mentioned committee report. A council of which the members were to be elected for a two-year term in accordance with the one man – one vote principle was proposed to be the supreme deciding body of each higher educational institution. The Council was to appoint the principal and the members of the executive board of the institution, approve its long-term financial plans and outline the general principles to be observed in its activity. The administration of the higher educational institutions was to be decentralized to a large extent, and the lower-level administrative bodies were to be elected according to the "tripartite" principle. University students were for the Government's proposal, even though they felt that it was definitely too conservative; they regarded the proposal as a compromise in which the one man – one vote principle was not realized to a sufficient extent. The National Union of Finnish Students in fact demanded that the principles of one man – one vote and "parliamentary government" be also applied in the case of lower-level administrative bodies. The institutions of higher education and their professors, who for the first time in the history of Finnish universities organized themselves as an association of their own during the debate on the administrative reform, were against the Government's proposal and demanded that the top-level administration be also organized in accordance with the "tripartite" principle.

Both the Government and the Committee emphasized the merits of the adoption of the one man – one vote principle, in comparison with the tripartite principle, feeling that a "quota system (the tripartite principle) might mean,

among other things, that the present difference of interests between the faculties would be replaced by a pursuance of the interests of the (three) groups of persons concerned." The Committee was of the opinion that a council elected according to the one man – one vote procedure by all those belonging to the university community would be the most democratic solution possible. The argument most commonly considered to speak against this solution, i.e., that the system would lead to "student power", was not tenable, as the Committee saw it. The Committee regarded it as unlikely that the distribution of votes would follow the lines of divisions between the various "functional" groups, believing that the distribution would be more likely to follow general social and political views and that coalitions of teachers and students would take shape on the basis of theses. Thus, in all probability, the administrative councils would come to consist of representatives of all the various groups of persons forming the university community.

In initiating the bill, the Government hoped that it could pass parliamentary debate and be enacted before the parliamentary election of March 1970. This did not prove possible, however, and the administration of Finnish universities still awaits modernization.

TEACHER TRAINING

Systematic teacher training – the training of primary school teachers and secondary school teachers – began in Finland more than a hundred years ago (cf. Introduction). Four-year training schools were founded to prepare teachers for primary schools. The preparation of secondary school teachers, based on a previously passed university degree, lasted one or two terms. The training of other teachers began later. The idea of teacher training programmes serving several fields simultaneously has had few proponents in Finland until very recently. Thus, teacher education in this country is very diversified but at the same time heterogeneous and even incoherent.

The altered targets, content and structure of education make changes imperative in the field of teacher education also. It has been considered appropriate to start the reform from the preparation of teachers for the primary and secondary schools or for the future comprehensive school, i.e., from the field where the traditions of teacher education are oldest and where the need for reforms is most urgent.

One of the most important goals of the planned reforms of teacher training is its unification. To this end, the requirements concerning pre-training education should be increased in several fields, and the duration of training itself should be either reduced or increased in others. Moreover, one of the leading principles of the present Finnish schooling policy should also be applied here, in that efforts should be made to eliminate the still existing educational blind alleys in the field of teacher training. At present it is often equally difficult for a teacher as for a student to pass from one school form to another. Only when teacher training is viewed as an integral whole can a basis be furnished for appropriate reforms in this sphere.

The present primary and secondary school teachers will be responsible for instruction in the comprehensive school for a considerable time, and many of them will pursue further studies, so as to be better able to bear this responsibility. A large proportion of the present primary school teachers have received their training in teacher training schools. From 1886 to the 1920s the training schools were based on the primary school course, but later they were gradually changed into institutions based on the completed junior secondary school course. Initially, the training school courses for those who had only completed primary school extended over four years and, from 1916 on, over five years.

At first the training school courses meant for those who had completed junior secondary school lasted three years, but four years have been required later. Special stipulations were in force even before the turn of the century concerning the further studies and training through which those who had

taken the matriculation examination could qualify as primary school teachers. Nevertheless, the systematic training of primary school teachers based on the matriculation examination did not begin until 1934, when the Jyväskylä Teachers College offering a two-year curriculum opened its doors (cf. Higher Education). Other two-year teacher colleges meant for those who had taken the matriculation examination were established later, and in 1968 all of them were changed into institutions with three-year curricula. Even before that date the centre of emphasis in primary school teacher education had shifted to the training of those who had taken the matriculation examination. Since 1958 no teacher-preparing institution has admitted applicants with a primary school background alone, even though certain training schools have had so-called preparatory classes meant for those who have not completed junior secondary school. The training of primary school teachers based on the junior secondary school course will also terminate in 1972 when the last student teachers admitted on a junior secondary school basis leave the training schools.

The training of secondary school teachers has consisted either of bachelor's or master's degree examinations passed at a university or of various subject-teacher examinations. After taking the requisite examinations the persons concerned have had to pursue further studies in education and to gain practical experience of teaching during one or two terms at a normal school (i.e., at a school specialized for the training of secondary school teachers).

There has been no difference of opinion regarding the level of basic education necessary for the future comprehen-

sive school teachers. All the committees and boards appointed to consider this question have held the view that the preparation of comprehensive school teachers should be based on the matriculation examination and last for a minimum of three years. According to the most recent proposals, the training of comprehensive school teachers should take place exclusively at universities. A four-year curriculum leading to an academic degree has been set as a long-term goal. It is being generally held that the matriculation examination or a schooling equivalent to it should be among the necessary conditions of admission to the training programmes meant for teachers of such non-academic subjects as metal work, wood work, applied mechanics, electricity, farm economics, etc. A majority of kindergarten teachers are even today persons who have taken the matriculation examination.

In the plans framed for the training of comprehensive school teachers particular attention has been devoted to the creation of a comparatively uniform body of teachers for the Finnish school system. This is especially because the employment of the same teachers at various school levels and in various school forms is regarded as desirable, particularly where this is called for by local or regional circumstances. This is the chief reason why efforts are being made to plan the preparation of primary- and secondary-level teachers on a common basis; this basis should, moreover, be such as to provide a starting-point for specialization: those who have received the basic training may later become either class or subject teachers for the comprehensive school or teachers for vocational or senior secondary schools.

According to the existing plans, class teachers should give instruction in all subjects at the lower comprehensive school level (comprising the first six forms), particularly in regions where the population is sparse. In the training of class teachers attention will, however, be paid to the opportunities that they will have to specialize in the instruction of some particular subjects or in the teaching of the lowest form-levels, so as to enable them to concentrate to some extent in tasks characteristic of their special fields. The employment of subject teachers will also be possible at the lowest level, and it will be resorted to particularly in urban-type localities and especially in foreign languages. At the upper level (comprising the seventh to nineth forms) instruction will be given exclusively by subject teachers. In the training of teachers for kindergartens and the possible preparatory classes (cf. Comprehensive School), attention will also be devoted to the special needs of the lowest comprehensive school forms, with a view to a flexible employment of teachers in various tasks.

It would seem that the teacher training departments of universities will have to assume responsibility for the preparation of teachers in the future. The class teacher examination, presupposing the completion of a three-year course, is intended to include educational studies to a larger extent compared with the subject teacher examinations. On the other hand, the training of subject teachers is intended to last about four years, during which those engaged on these programmes would gain mastery at least of two comprehensive-school subjects. This kind of training would consist either of a special subject teacher examination or of a bachelor's degree examination combined with educational studies and practice

teaching. The practice teaching requirements would be approximately similar in extent in the case of all teachers. According to the existing long-term plans, both the subject teacher and class teacher examinations would gradually develop into corresponding bachelor's degree examinations. Compared with the present primary school teacher examination and many of the present subject teacher examinations, such a system would offer better possibilities for the pursuance of further studies.

All the parties involved are unanimous as regards the general lines along which the training of teachers for the comprehensive schools should be developed. Nevertheless, the National Board of Schools has been against the plans according to which the training of teachers should take place at universities in the future. The principal argument put forward by the Board in support of its view is that, if the preparation of teachers took place in universities, theoretical studies might become overemphasized. Moreover, if universities assumed responsibility for teacher training, the administration of the teacher training system would shift partly from the National Board of Schools to the Ministry of Education, and the Board feels that this would be harmful to the development of the school system of the country.

The in-service training of teachers may be of two different types: short-term supplementary training or longer-term further education. The former means a training that purports to increase the teacher's knowledge and skills and to influence his attitudes, so as to make him better able to follow the developments taking place in the sphere of teaching. The latter means a training through which the teacher receives

preparation for tasks substantially different from those he had discharged previously or representing a higher ability level, and such training usually presupposes studies during at least one term. Both types of in-service training should be voluntary. And for the teachers to be sufficiently motivated, it has been proposed that, subject to certain qualifications, participation in in-service training should be taken into account in the remuneration of teachers.

Since the greatest possible flexibility is one of the goals aimed at in future teacher training, efforts will be made to provide comprehensive school teachers with an opportunity to pursue further additional studies, so as to qualify as teachers for senior secondary schools or vocational schools. (It is being required, as a rule, that a senior secondary school teacher be one with a master's degree.) It is being proposed that other kinds of shifts from one school form or school level to another should also be possible. Some of the committees that have considered these questions have felt it important not to tie teachers' remuneration up with the type or level of school but with the examinations passed by them and their qualifications. The realization of this principle is bound to meet with difficulties, however, and it would seem that this goal cannot be achieved in the near future.

It has been estimated that the need for teachers will not change greatly because of the comprehensive school reform unless the size of the groups to be taught be reduced considerably (and efforts are in fact being made to diminish their size). At mid-1970s a total of some 22,500 teachers are calculated to be necessary for the lower comprehensive school level, whereas the need of higher level comprehensive school

teachers has been estimated at some 12,500. When the requirements of senior secondary schools and vocational schools are also taken into consideration, a total of some 46,000 teachers will be needed at the middle of the 1970-s. This implies that almost 2,000 new teachers should be trained for these educational institutions annually.

As already stated, the training of comprehensive school teachers will probably take place at universities: at the University of Helsinki, the University of Jyväskylä, the University of Oulu, the University of Tampere, the University of Turku, the University of Joensuu and (as far as the training of teachers for Swedish-language schools is concerned) at the Abo Academy. Only one of these higher educational institutions, namely, the University of Joensuu, would chiefly specialize in teacher training.

ADULT EDUCATION

In Finland the roots of adult education can be traced back to the first decades of the latter half of the nineteenth century, which was a period characterized by increased political and social activity and the beginnings of industrialization in Finnish society and during which a primary school system was founded to replace the popular education provided by the Church for centuries. When the elementary school system was established, it was also supposed to serve the purposes of adult education. Nevertheless, adult education and the educational activities meant for young people were developed on a voluntary basis from the outset.

The first efforts in this field included the founding of libraries meant particularly for the Finnish-speaking section of the people, which – in spite of being the majority group – was linguistically underprivileged. Also, reading circles were founded. Most of them – though not all – were connected with the newly established libraries. This was, it seems, a symptom of an awakening of the people's spontaneous interest in education and civilization. The organizations of university students also endeavoured to promote this interest

through their popular lecturing activities. However, it was only in the 1880s that the voluntary forms of adult education began to gain more general importance when the first young people's societies, temperance societies and workers' associations were founded in Finland and created a basis for better established forms of voluntary adult education.

These included folk high schools, the first of which were founded in the early 1890s, and workers' institutes, the first of which were founded a decade later. The former were boarding schools meant mainly for the rural youth, whereas the latter were evening-class institutions. An ideological background for the various forms of adult education – organizational as well as institutional – was formed particularly by the nationalist awakening of the Finnish-speaking population of the country, which – towards the end of the last century when the autonomous position of Finland was imperilled by the oppression measures undertaken by the Russians – also assumed the character of national self-defense. At the turn of the century the labour movement, which had adopted social views of its own and had also developed into a political organization, became another ideological background factor of adult education. Initially the labour movement strongly supported the development of the workers' institute system, but later it adopted another line, which amounted to the promotion of adult education principally within the framework of various labour organizations. In 1919, Workers' Educational Association was founded to serve as a central organ for such organizations.

When Finland became an independent republic, both the organizations and institutions for adult education developed

strongly. The folk high school system expanded, in that higher-level folk high schools were founded. Moreover, educational institutions similar to workers' institutes but called civic institutes to emphasize that they were meant for the general public at large were established. The study group activities, which had been pursued since the turn of the century, grew increasingly important and became one of the principal forms of non-institutional adult education. Correspondence instruction was also started shortly after Finland had achieved independence.

Voluntary adult education had even previously been supported financially by the State to some extent. In the 1920s this support was established on a more permanent, legally provided basis. A law concerning State aid to folk high schools was enacted first (1924), a law concerning State aid to workers' institutes followed next (1926), and one concerning State aid to libraries was also passed (1928). The principles underlying this system of State support are still in force, even though the relevant legal provisions have since been revised a number of times and most recently in the 1960s, when the State aid system was extended to cover the centres for physical education and study group activities as well.

This expansion of voluntary adult education also made it necessary to organize the training of workers for the field. To this end, instruction of adult education was started in 1927 at the School of Social Sciences, which later became the University of Tampere where a professorship in adult education was founded in 1945.

After the Second World War, in the late 1940s and in the 1950s, development in the field of adult education was mainly quantitative in character. On the other hand, its institutional and organizational forms did not alter greatly, even though the process of economic and social change characteristic of these decades was reflected in the curricula and study programmes. In the 1960s, however, a new and broader concept of adult education began to gain ground. The distinctive features of this concept included the view that adult education was a life-long process, or the principle of permanent education, and the incorporation of training aiming at examinations and vocational adult education in the adult education system of the country.

The embracement of the principle of permanent education has had the implication that efforts have been made to plan and execute the educational measures meant for various periods of life in such a way that they will form an integral whole. This view has also had an impact on the school reform that is under way today and that is meant to provide a basis for the further development of the Finnish adult education system. From the point of view of permanent education, adult education does not primarily amount to compensation for the education that mature persons missed in childhood and youth as it was viewed traditionally; instead, it is regarded as a form of further and supplementary education, either of a general or of a vocational nature, which may be based on a variety of types of schooling, and as a form of education intended to promote the personality development of those to be educated and to correspond to their individual tastes and aptitudes.

The Finnish system of adult education is heterogeneous both structurally and administratively. This is because the forms of activity are many and varied and take place at a variety of levels, and because its present phase is characterized both by quantitative growth and broadening vistas. This heterogeneity makes it difficult to define its scope and tasks accurately. In consequence, a merely descriptive account will be given below of such measures as can be considered to have the nature of adult education. Traditionally, adult education has primarily been of a general, non-vocational character. This covers, first of all, those educational activities that are intended to provide incentives necessary for development and that may be characterized as extensive adult education. The more intensive forms of adult education include the organization of instruction and guidance. In connection with this form, adult instruction is spoken of, and the organized forms of adult education actually consist mainly in adult instruction. Where adult instruction is of a vocational nature or aims at the passing of examinations, it is also called adult schooling.

It is impossible to draw any hard and fast lines between adult education and the school system proper; nor would such a line of division be very meaningful from the point of view of permanent education. As the opportunities of adults to pass school examinations proper increase, the two systems become increasingly closely associated with each other. Though the lines of division between adult education and the rest of the educational system, just as those between the various sectors of adult education, are apparent rather than real, some kind of classification is necessary in order for us to form a general picture. Thus, adult education will be dealt

with below under two principal heads: general (non-vocational) and vocational adult education. Moreover, university-level adult education will be considered separately.

GENERAL ADULT EDUCATION

The oldest type of istitutions for adult education in Finland is the folk high school. The folk high schools are boarding-schools, the task of which is to provide general, social and vocational instruction. A folk high school is either a folk high school proper or a higher-level folk high school, providing more advanced-level and specialized instruction to those who have completed the folk high school course proper. There are 83 folk high schools in Finland; 64 of these are folk high schools proper and 9 are higher-level folk high schools, the remaining 10 consisting of both. The basic folk high school course lasts about half a year, and it is completed by some 6,000 young people every year; moreover, folk high schools also organize shorter courses, mainly in the summer time, and these are attended by about 2,000 persons every year. In recent years the number of students in the higher-level folk high schools has increased relative to the number of those in folk high schools proper. Instruction in the folk high schools proper, too, has developed in an increasingly theoretical direction and increasing attention has been paid to differentiation according to various fields of study. The number of folk high schools can be regarded as sufficient for the present. The legal provisions concerning the aid payable from public

funds to folk high schools that came into force at the beginning of 1970 provide these institutions with improved possibilities of development on a financially more stable basis than hitherto.

The *physical education centres* are also boarding schools. They are intended to provide instruction and training in sports, athletics and gymnastics, but their curricula also include courses in subjects of a general educational significance and in social studies. These centres are either places where theoretical instruction and practical training is given or places where instruction is given, moreover, to those preparing for leadership tasks in the field. The physical education centres entitled to legally provided aid from State funds number six, two of which are of the latter type. The number of those participating in various kinds of courses in these centres is about 15,000 a year.

Civic institutes and *workers' institutes* are evening-school type institutions the task of which is to promote adult education by teaching citizens such kinds of knowledge and skills as are useful in civic life, provide a basis for further studies, promote self-development and help them to use their spare time appropriately. Being educational institutions designed to serve a multitude of ends, they are well suited to serve adolescents and adults interested in learning and study. In the 1960s numerous civic and workers' institutes were founded in the countryside, too, and their total number more than doubled over the decade. At the beginning of 1970, a total of 229 institutes were in operation. Some 250,000 students are enrolled at these institutes annually. Each institute serves a district of its own, consisting of the areas of one

or more municipalities. At present the network of these institutes covers about 85 per cent of the total population of the country; thus, to make this form of adult education accessible to every citizen, it would be sufficient to found another score of such institutes. A majority of these institutions are run by municipalities, and both the municipal and the privately operated institutions are assisted from State funds.

The *institutions for the teaching of music*, which provide instruction in musical theory and applied music and are also meant to promote the cultivation of music in general, may be regarded, in part, as institutions for adult education. There are over 40 institutions for the teaching of music in Finland, all being aided from State funds either under provisions of law or factually. The students of these institutions total about 12,000.

There are also several cultural and other *organizations* that engage in adult educational activities. The forms of activity of these organizations are many and varied, and partly extensive rather than intensive. The *study circle* is the most typically educational among them. The study circle is mostly a group formed of members of an association or other organization in order to pursue planned studies of one kind or another. For the purposes of study circle activities the organizations concerned have founded six national study centres, which assist the organizations in the arrangement of study circle activities, provide them with instructions for study and serve as organs through which the legally provided State support is paid to the study circles. The study circles in receipt of State aid number about 8,500 (1970) and the

number of students in these circles is almost 100,000. The other forms of adult educational activity of associations and other organizations that deserve mention include the arrangement of lectures, various courses and seminars.

Most of the bodies providing *correspondence instruction* are also maintained by various organizations. There are about fifteen such bodies. Correspondence courses can be taken not only in general, non-vocational but also in vocational subjects; moreover, school courses can also be completed by mail. There are about 50,000 correspondence students in Finland, some of whom are simultaneoulsy members of study circles.

Both secondary school and vocational school examinations can be passed within the framework of adult educational programmes. *Evening secondary schools* have been founded to this end and there are *evening classes* in some ordinary secondary schools. Evening secondary schools and secondary schools with evening classes number 17 at present (1970), the number of students attending them being about 7,000. Secondary school examinations may also be taken by private students, and instruction preparing candidates for these examinations is given to some extent in folk high schools, civic institutes and workers' institutes and in the form of correspondence courses. Also, an experiment with a system in which correspondence instruction is supplemented by teaching and guidance given in secondary schools is under way.

Some commercial and technical schools and colleges have organized evening classes for those who wish to pass vocational examinations as part-time students. Moreover, there are institutions for commercial and other vocational education at

which correspondence students and other private students may take examinations.

Vocational adult education is provided by institutions for vocational education, and particular courses – which may be either basic courses or continuation and supplementary courses – are also arranged to this end. The number of such courses organized in 1967 was 427 in all and the number of participants totalled 7,701. The vocational courses arranged for the promotion of employment form a group on their own; in 1967, 506 courses of this kind were arranged, and they were attended by a total of 7,943 persons. The employment course activities are financed entirely from State funds, and plans are being prepared for a particular course centre network for the purpose.

In addition to courses of the above kind, which are supervised by the vocational education authorities, several organizations of trade and industry and several industrial and commercial undertakings engage in vocational adult education. There are so-called schooling centres, which are usually boarding school type institutions designed to help the local government agencies, industry, commerce, etc. to meet their demand for trained personnel. Several organizations representing various branches of industry and commerce also provide vocational continuation education on a regular and, in some cases, on an institutional basis. Moreover, large industrial and commercial undertakings have on-the-job training facilities for their employees.

Adult education, in a broad sense, also comprises the consultant services provided by various organizations for the promotion of farm economics, forestry and home economics

and by other comparable organizations. Most of these activities are subsidized from State funds.

General cultural services are provided by *public libraries*, which are municipal institutions in Finland. There are a total of 540 main libraries and 2,740 branch libraries, with a total of some 10 million books. The number of persons making use of public libraries is about 1.1 million, and the number of loans is approximately 24 million a year. General cultural services are provided, moreover, by various art institutes and museums. The cultural services of radio and television have been developed in such a way that today they serve instructional purposes also. This has taken place partly in cooperation with various institutions and organizations for adult education.

In the 1930s, the Finnish *universities* and other comparable institutions for higher education also participated tentatively in adult education to some extent. Some lecture courses serving this purpose have also been arranged later, but they have been of limited importance. This has been partly compensated for by the Finnish "summer university" system. Summer universities are summer-schools intended mainly to offer university students an opportunity to pursue studies during the summer vacation – none of the Finnish universities have summer terms – but they also provide numerous courses and seminars not intended for university students alone. In principle, anybody is permitted to study at the summer universities. Last summer (1969) there were 19 summer universities in all, and the number of those pursuing studies at them has been some 30,000 a year.

The founding of a centre for continuation studies at the University of Tampere in 1970 will considerably extend the adult education provided by universities. The task of this centre will be to organize various types of instruction, at various levels, in fields represented at the university or in closely related fields. It may, moreover, arrange courses, seminars, conferences and other comparable activities, both on its own initiative and on the initiative of outsiders. It will also be possible to pass examinations based on the instruction given there.

The Finnish system of adult education is both extensive and multi-dimensional. It has, of course, shortcomings and weaknesses of its own, which are mainly due to the fact that the system has come into existence spontaneously and without a uniform plan. Nevertheless, it offers a good starting point for further development. In order to put the principle of permanent education into practice, overall planning and coordination of the various activities is necessary in the sphere of adult education. The reform of the Finnish school system that is taking place at present will furnish a foundation for this planning and coordination, and this reform also makes it possible to associate adult education more closely than hitherto with the school system proper. Development in this direction has, in fact, already started; for instance, plans exist for the utilization of common buildings, equipment and teaching staffs.

Yet the development of adult education also presupposes research, for which a joint Nordic programme, for example, has already been worked out. To intensify adult education it is necessary to intensify and extend teacher training and

attention must be devoted to the development of the methods of adult education. A comparatively sound financial basis has been furnished by central and local government aid for certain forms of adult education, but there are other forms that are not yet being assisted sufficiently. The additional funds necessary for the development of adult education are not, however, out of proportion either to the resources of Finnish society or to its prospects for economic growth; and, on the other hand, what is spent on adult education can be regarded as a most profitable kind of investment from the standpoint of economic growth and cultural development.

Kosti Huuhka

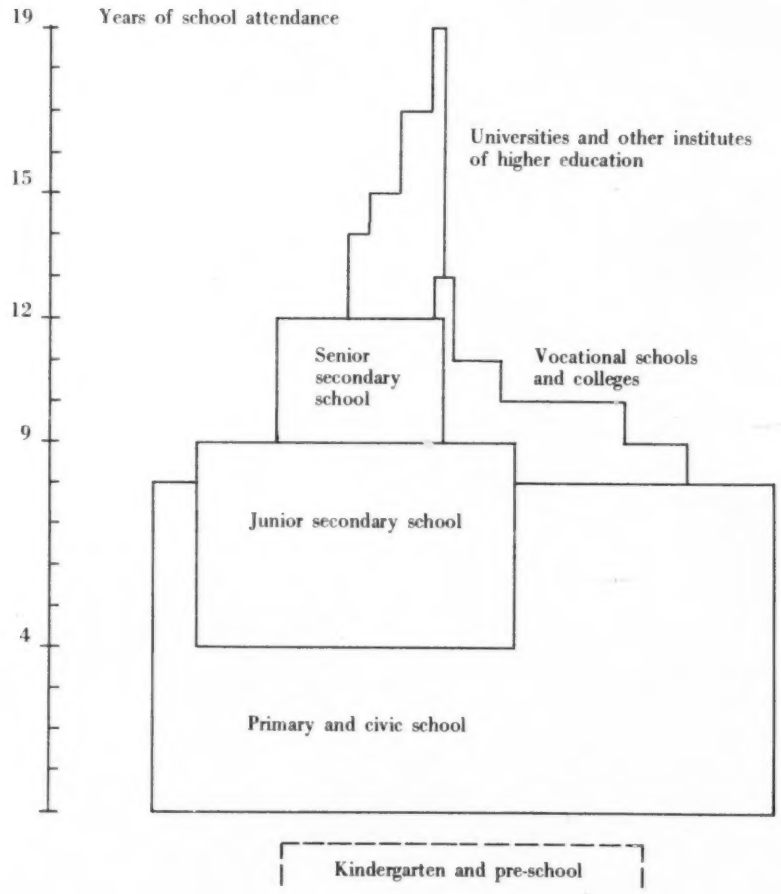
APPENDICES

NUMBER AND PERCENTAGE OF STUDENTS ACCORDING TO TYPE OF SCHOOL IN THE YEARS 1959–66

TYPE OF SCHOOL	1950 (%)	1955 (%)	1960 (%)	1966 (%)	Female students %
Primary Schools	491,000 (77.0)	593,000 (74.7)	629,000 (67.4)	528,000 (55.3)	47
Secondary Schools	95,000 (14.9)	134,000 (16.9)	215,000 (23.0)	282,000 (29.6)	56
Civic and Workers' Institutes	4,000 (0.6)	5,000 (0.6)	6,000 (0.6)	8,000 (0.8)	73
Vocational Schools and Colleges	33,000 (5.2)	45,000 (5.7)	60,000 (6.4)	92,000 (9.6)	43
Universities	15,000 (2.3)	17,000 (2.1)	24,000 (2.6)	45,000 (4.7)	49
TOTAL	638,000 (100.0)	794,000 (100.0)	934,000 (100.0)	955,000 (100.0)	50

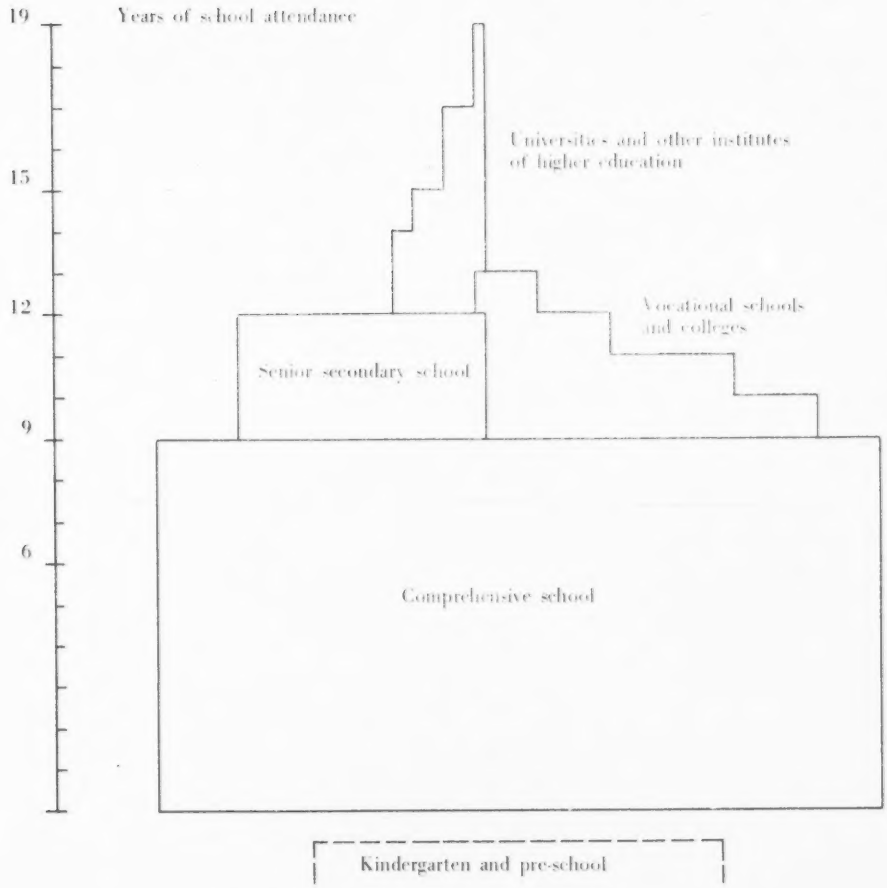
APPENDIX 2

THE STRUCTURE OF THE PRESENT SCHOOL SYSTEM IN FINLAND



APPENDIX 3

THE STRUCTURE OF THE SCHOOL SYSTEM AFTER THE INTRODUCTION OF THE COMPREHENSIVE SCHOOL

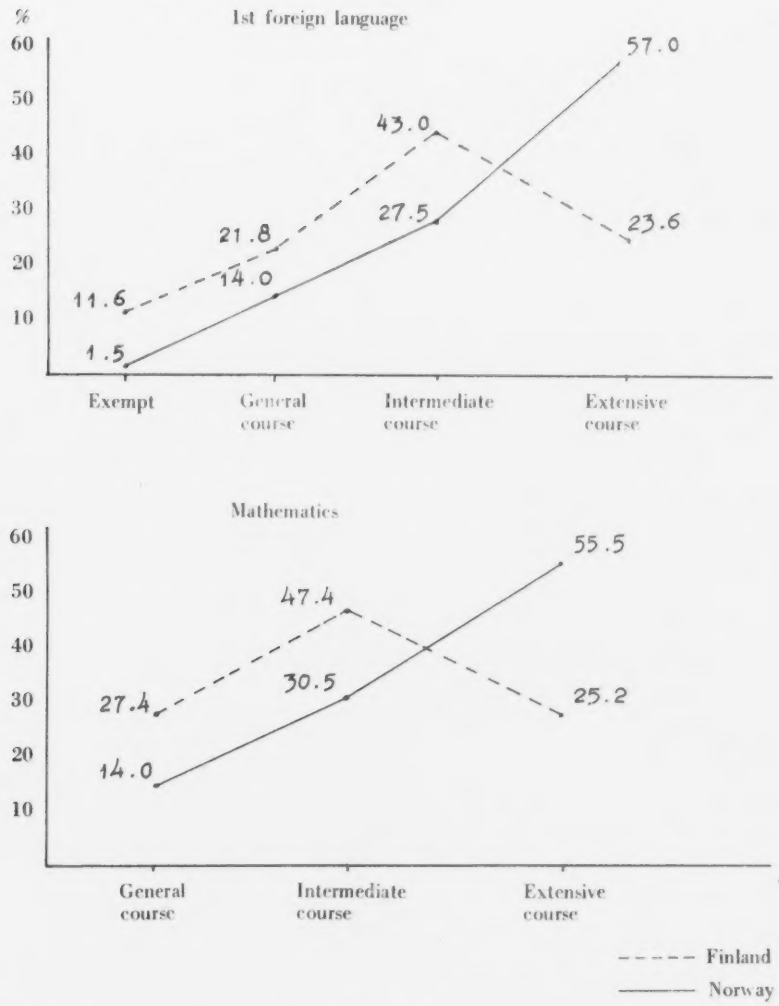


NUMBER OF PRIMARY AND SECONDARY SCHOOLS AND OF PUPILS BY TYPE OF SCHOOL AND LANGUAGE, 1969

	SCHOOLS			PUPILS		
	Finnish	Swedish	Total	Finnish	Swedish	Total
Primary Schools	4,350	310	4,660	370,376	18,067	388,443
Civic Schools	421	36	457	76,308	3,015	79,323
Comprehensive School (upper level)	23	3	26	6,798	412	7,210
Classes for slightly mentally retarded	274	17	291	6,259	286	6,542
Secondary Schools						
– State-owned	132	18	150	87,990	8,057	96,047
– private	333	21	364	170,200	8,760	178,960
Municipal junior secondary Schools	136	8	144	42,269	1,653	44,122
Foreign Language Schools	–	–	3	–	–	587

APPENDIX 5

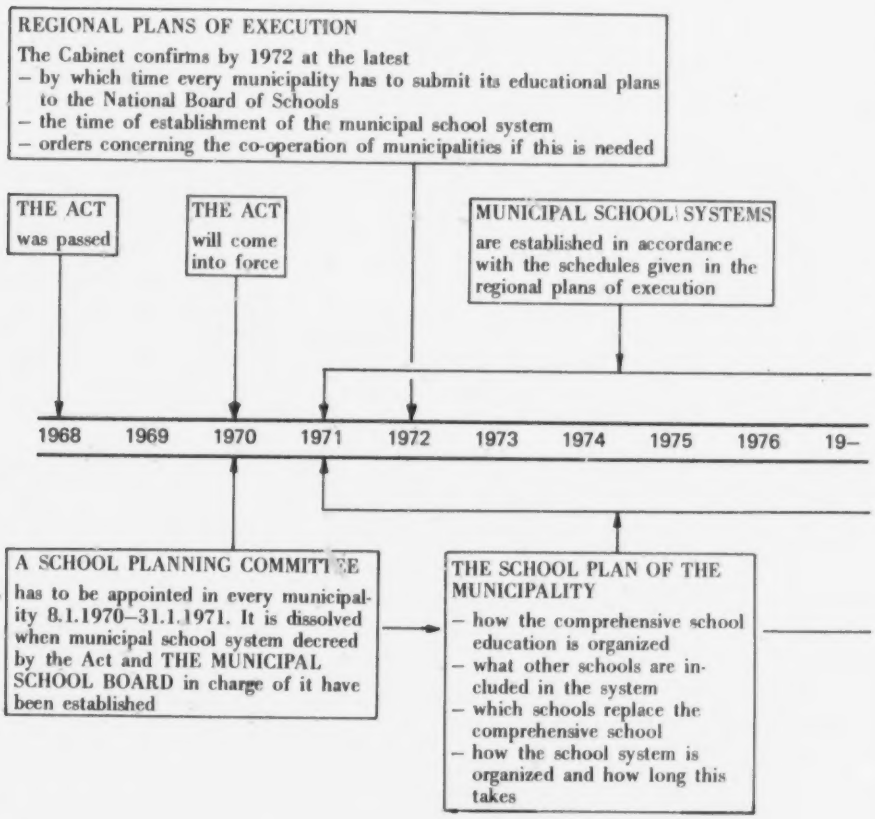
COMPARISON BETWEEN LEVEL COURSE SELECTIONS IN FINLAND AND NORWAY

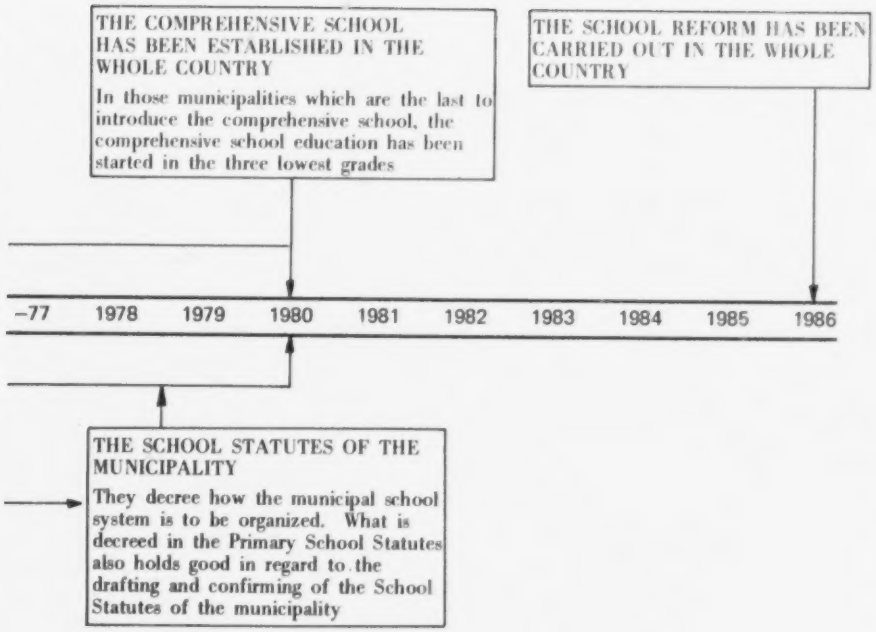


E.Toivonen: Comprehensive School in Finland, Helsinki 1969

APPENDIX 6

SCHEDULE FOR THE INTRODUCTION OF THE COMPREHENSIVE SCHOOL


REGIONAL PLANS OF EXECUTION
The Cabinet confirms by 1972 at the latest
– by which time every municipality has to submit its educational plans to the National Board of Schools
– the time of establishment of the municipal school system
– orders concerning the co-operation of municipalities if this is needed
THE ACT
was passed
THE ACT
will come into force
MUNICIPAL SCHOOL SYSTEMS
are established in accordance with the schedules given in the regional plans of execution
1968
1969
1970
1971
1972
1973
1974
1975
1976
19–
A SCHOOL PLANNING COMMITTEE
has to be appointed in every municipality 8.1.1970–31.1.1971. It is dissolved when municipal school system decreed by the Act and THE MUNICIPAL SCHOOL BOARD in charge of it have been established
THE SCHOOL PLAN OF THE MUNICIPALITY
– how the comprehensive school education is organized
– what other schools are included in the system
– which schools replace the comprehensive school
– how the school system is organized and how long this takes


THE COMPREHENSIVE SCHOOL HAS BEEN ESTABLISHED IN THE WHOLE COUNTRY
In those municipalities which are the last to introduce the comprehensive school, the comprehensive school education has been started in the three lowest grades
THE SCHOOL REFORM HAS BEEN CARRIED OUT IN THE WHOLE COUNTRY
–77
1978
1979
1980
1981
1982
1983
1984
1985
1986
THE SCHOOL STATUTES OF THE MUNICIPALITY
They decree how the municipal school system is to be organized. What is decreed in the Primary School Statutes also holds good in regard to the drafting and confirming of the School Statutes of the municipality

E.Toivonen: Comprehensive School in Finland, Helsinki 1969

APPENDIX 7

NUMBER OF STUDENTS IN THE VOCATIONAL SCHOOLS AND COLLEGES, AUTUMN 1969

Type of school	number of students	number of schools
General vocational schools		
State-owned central vocational schools	5,661	8
Vocational schools owned jointly by municipalities	17,681	54
Vocational schools owned by a municipality	11,112	21
Special vocational schools		
Privately owned vocational schools (industry and commerce)	4,189	54
Vocational schools for the disabled and handicapped	1,287	9
Apprentice schools	1,115	6
State-owned vocational boarding-schools	100	1
Teacher-training colleges for vocational education	213	2
Other vocational colleges	264	3
TOTAL	43,180	168

APPENDIX 8

NUMBER OF NEW UNIVERSITY LEVEL STUDENTS AND STUDENTS ENROLLED IN THE UNIVERSITIES (1945–1981 prognosis)

Year	Number of students who have passed the matriculation examination	Number of new students enrolled in universities	Number of university–level students total
1945	2,487	4,376	13,600
1950	4,073	2,949	14,414
1955	4,687	3,824	16,752
1960	7,666	5,770	23,552
1961	8,413	6,455	26,849
1962	9,623	6,558	29,615
1963	10,058	7,448	32,624
1964	11,588	8,265	35,910
1965	13,444	10,044	38,408
1966	14,592	10,162	44,426
1967	15,793	10,300	50,082
1968	16,500	9,535	52,936
1969	17,352	9,770	56,500
(Prognosis)			
1972	18,100	approximately	54,740
1975	20,100	10,000–13,000	60,315
1978	20,700	per annum	67,170
1981	22,400		73,885

APPENDIX 9

THE NUMBER OF STUDENTS IN THE AUTUMN OF 1969 BY UNIVERSITIES AND DISCIPLINES

UNIVERSITY	Humanities	Mathematics and Natural Sciences	Social Sciences	Economics	Technology
University of Helsinki	7,680	5,615	3,279	–	–
Technical University of Helsinki	–	–	–	–	4,855
Helsinki School of Economics	–	–	–	2,876	–
Helsinki Swedish School of Economics	–	–	–	1,229	–
College of Veterinary Medicine	–	–	–	–	–
University of Turku	2.707	1,802	846	–	–
Swedish University of Turku	748	720	331	–	269
Turku School of Economics	–	–	–	881	–
Turku Swedish School of Economics	–	–	–	391	–
University of Tampere	1,519	–	1,678	1,801	–
Technical University of Tampere	–	–	–	–	573
University of Oulu	1,104	1,339	–	–	1,091
University of Jyväskylä	1,732	714	1,507	–	–
Vaasa School of Economics	–	–	–	287	–
Technical University of Lappeenranta	–	–	–	–	47
TOTAL	15,490	10,190	7,641	7,464	6 835

Medicine	Law	Agriculture and Forestry	Theology	Physical Education	Total	Female
1,565	2,172	1,270	1,144	189	22,914	12,098
–	–	–	–	–	4,855	383
–	–	–	–	–	2,876	1,422
–	–	–	–	–	1,229	555
156	–	–	–	–	156	59
914	592	–	–	–	6,861	3,759
–	–	–	128	–	2,196	909
–	–	–	–	–	881	318
–	–	–	–	–	391	161
–	–	–	–	–	4,998	2,922
–	–	–	–	–	573	12
375	–	–	–	–	3,909	1,616
–	–	–	–	346	4,299	2,530
–	–	–	–	–	287	179
–	–	–	–	–	47	1
3,010	2,764	1,270	1,272	535	56,471	26,924

APPENDIX 10

UNIVERSITY TOWNS AND THE NUMBER OF STUDENTS IN FINLAND IN 1969

NEW STUDENTS IN THE ACADEMIC YEAR 1966/67, BY FATHER'S SOCIAL STATUS AND STUDENT'S SEX

Father's social status	Total		NEW STUDENTS Male (48.2%)		Female (51.8%)	
		%		%		%
Higher employees and entrepreneurs comparable to them	3,264	32.1	1,712	35.0	1,552	29.5
Lower employees and small entrepreneurs	2,972	29.3	1,362	27.8	1,610	30.6
Skilled workers	1,677	16.5	781	15.9	896	17.0
Unskilled workers	347	3.4	157	3.2	190	3.6
Farmers, fishermen etc.	1,756	17.3	798	16.3	958	18.2
Others (retired persons with previous profession unknown, students etc.)	146	1.4	87	1.8	59	1.1
TOTAL	10,162	100.0	4,897	100.0	5,265	100.0

DIMENSIONAL PLAN FOR HIGHER EDUCATION

Estimate of the number of full-time students and postgraduate students by 1981

MAIN DISCIPLINE	Full-time [1] + postgraduate students			
Branch of study	1972	1975	1978	1981
DISCIPLINE I	22,780 + 1,900	23,910 + 2,390	25,720 + 2,830	27,430 + 3,310
Theology	880 + 90	880 + 110	950 + 110	1,030 + 120
Humanities	9,650 + 730	10,050 + 950	10,800 + 1,120	11,000 + 1,310
Law	1,450 + 170	1,550 + 190	1,700 + 250	1,800 + 250
Social Sciences	5,550 + 550	5,850 + 700	6,220 + 830	6,650 + 930
Economics	4,800 + 340	5,050 + 400	5,450 + 460	6,350 + 620
Physical Education	450 + 20	530 + 40	600 + 60	600 + 80
DISCIPLINE II	10,600 + 850	12,000 + 1,100	13,800 + 1,360	15,600 + 1,700
Mathematics & Natural Sciences	9,400 + 750	10,700 + 970	12,200 + 1,200	13,800 + 1,500
Agriculture & Forestry	1,200 + 100	1,300 + 130	1,600 + 160	1,800 + 200
DISCIPLINE III Technology	6,670 + 550	8,400 + 680	9,650 + 850	11,400 + 1,050
DISCIPLINE IV Medicine	3,330 + 470	4,050 + 610	5,140 + 780	5,740 + 940
TOTAL	43,380 + 3,770	48,360 + 4,780	54,310 + 5,820	60,170 + 7,000

1) The tolat number of students has been transformed on the basis of estimation to the corresponding number of the full-time equivalent students.

APPENDIX 13

PLAN FOR THE DEVELOPMENT OF THE PROPORTION OF STUDENTS/TEACHERS IN HIGHER EDUCATION IN 1968–75

	Full-time students per full-time teacher Average for different universities			
	1968	1972	1975	1981
Theology	25.0	20.0	16.0	12.0
Law	30.0	21.0	17.0	12.0
Humanities	20.0–30.0	15.0–20.0	13.0–17.0	12.0
Social Sciences	20.0–35.0	16.0–22.0	14.0–19.0	12.0
Economics	10.0–20.0	10.0–17.0	10.0–15.0	12.0
Physical Education	15.0	13.0	12.0	12.0
Mathematics & Natural Sciences	10.0–19.0	8.0–13.0	8.0–12.0	8.0
Agriculture & Forestry	11.0	9.0	8.0	8.0
Technology	9.0–10.0	8.5–10.0	8.5–9.0	8.0
Medicine	4.0–6.0	4.0–6.0	4.0–6.0	4.0–6.0

UNIVERSITY STUDENTS AND STAFF 1966–1969

	1966	1967	1968	1969
1. Students	46,000	50,050	53,000	56,500
2. Teaching staff	2,340	2,600	2,950	3,200
3. Assisting teaching staff	600	650	700	750
4. Administrative staff	300	340	400	500
5. Library staff	200	220	240	260
6. Others (service etc.)	330	370	380	410
Total 3–6	1,430	1,580	1,720	1,920

N.B. Items 3–6 should also include temporary and part-time staff. It has not, however, been possible to include the figures on the said staff in the above table.

EXAMINATIONS PASSED IN FINNISH UNIVERSITIES IN 1962–68

	1962	1963	1964	1965	1966	1967	1968
1. HUMANITIES, LAW, SOCIAL SCIENCES							
Lower academic degrees	1394	1473	1474	1721	1924	2104	2282
Higher academic degrees	632	728	850	1043	1218	1412	1629
Licentiate's degrees	39	37	51	78	67	85	78
2. MATHEMATICS, NATURAL SCIENCES							
Lower academic degrees	513	610	794	835	890	922	1022
Higher academic degrees	293	305	358	440	506	585	629
Licentiate's degrees	47	47	68	59	74	98	118
3. TECHNOLOGY							
Higher academic degrees	326	237	389	401	486	519	545
Licentiate's degrees	21	28	23	27	37	46	41
4. MEDICINE							
Candidate's degrees	349	424	487	506	412	547	546
Licentiate's degrees	267	325	322	345	378	336	377

APPENDIX 16

COSTS IN 1000 MILLION MARKS AND PERCENTAGE OF ALL GOVERNMENT EXPENDITURE FOR EDUCATION AND CULTURE

Year	Administration	General education	Vocational education	Higher education	Other expenditure on science and arts
1966	1 (0.1)	665 (59.0)	238 (21.2)	134 (11.9)	23 (2.0)
1967	2 (0.2)	762 (58.3)	276 (21.1)	161 (12.4)	30 (2.3)
1968	3 (0.2)	864 (57.3)	326 (21.6)	190 (12.6)	37 (2.5)
1969	3 (0.2)	883 (55.7)	346 (21.8)	230 (14.6)	40 (2.5)
1970	9 (0.5)	922 (52.1)	433 (24.5)	270 (15.3)	43 (2.4)

Free adult education, libraries and museums	Sport and youth activities	Ecclesiestical expenditure	Total expenditure for education and culture. (The costs in per cent of the State budget)	Annual budget of the State
45 (4.0)	19 (1.7)	2 (0.2)	1,127 (15.7)	7,167
48 (3.7)	23 (1.8)	3 (0.2)	1,306 (16.2)	8,058
57 (3.8)	27 (1.8)	4 (0.3)	1,507 (15.4)	9,785
58 (3.7)	23 (1.5)	3 (0.2)	1,584 (17.2)	9,221
66 (3.7)	26 (1.5)	3 (0.2)	1,770 (17.3)	10,209

APPENDIX 17

POPULATION OF FINLAND BY LANGUAGE

YEAR	FINNISH		SWEDISH		TOTAL
Whole country		(%)		(%)	
1880	1,756,381	(85.2)	294,876	(14.3)	2,060,782
1890	2,048,545	(86.1)	322,604	(13.6)	2,380,140
1900	2,352,990	(86.6)	349,733	(12.9)	2,712,562
1910	2,571,145	(88.0)	338,961	(11.6)	2,921,197
1920	2,754,228	(88.7)	340,963	(11.0)	3,105,103
1930	3,022,257	(89.4)	342,916	(10.1)	3,380,748
1940	3,327,534	(90.0)	353,985	(9.6)	3,695,617
1950	3,670,918	(91.1)	348,286	(8.6)	4,029,803
1960	4,108,269	(92.4)	330,538	(7.4)	4,446,222
Towns					
1880	100,300	(57.8)	65,725	(37.9)	173,401
1890	150,883	(64.1)	78,491	(33.4)	235,227
1900	236,388	(69.6)	97,267	(28.6)	339,613
1910	314,884	(73.7)	107,955	(25.3)	426,911
1920	373,413	(75.7)	114,049	(23.1)	493,112
1930	496,969	(79.1)	121,461	(19,3)	628,316
1940	715,215	(82.9)	138,952	(16.1)	862,630
1950	1,147,945	(88.1)	148,315	(11.4)	1,302,427
1960	1,553,151	(90.1)	148,873	(8.7)	1,707,049

APPENDIX 18

EXPLANATORY OF TERMS

Esikoulu / Förskola	establishment of pre-school education	établissement préscolaire
Kansakoulu / Folkskola	primary school (lower and upper level)	école primaire (cycle inférieur et supérieur)
Varsinainen kansakoulu / Egentlig folkskola	"primary school proper", lower level of primary school	école primaire élémentaire, cycle inférieur
Kansalaiskoulu / Medborgarskola	"civic school", upper level of primary school leading mainly to vocational training	"école civique", cycle supérieur de l'école primaire menant avant tout a l'enseignement professionnel
Kunnallinen keskikoulu / Kommunal mellanskola	"municipal junior secondary school"; lower level of secondary education leading to higher education	école secondaire municipale, menant à l'enseignement supérieur (cycle inférieur)
Oppikoulu / Läroverk	secondary school; lower and upper levels leading to higher studies	école secondaire menant à l'enseignement supérieur (cycle inférieur)
Keskikoulu / Mellanskola	"junior secondary school", lower level of secondary education leading to higher studies	école secondaire menant à l'enseignement supérieur (cycle inférieur)
Lukio / Gymnasium	"senior secondary school", upper level of secondary education leading to higher studies	école secondaire menant à l'enseignement supérieur (cycle supérieur)
Valtionoppikoulut / Statsläroverk	State secondary schools	écoles publiques secondaires
Yksityisoppikoulut / Privatläroverk	private secondary schools	écoles secondaires privées

Ylioppilastutkinto / Studentexamen	matriculation examination (from the senior secondary school), basic requirement for academic studies	examen de sortie d'une école secondaire donnant accès à l'enseignement supérieur
Peruskoulu / Grundskola	compulsory comprehensive school	école unique obligatoire
Teknillinen koulu / Teknisk skola	technical school, lower level of technical education	école secondaire technique, cycle inférieur
Kauppakoulu / Handelsskola	commercial school, lower level of commercial education	école de commerce, cycle inférieur
Yleinen ammattikoulu / Allmän yrkesskola	general vocational school, offering general and technical training	école professionnelle qui assure une formation de base "professionnelle générale"
Erikoisalan ammattikoulu / Special yrkesskola	vocational schools for special fields	écoles professionnelles spécialisées
Merenkulkukoulu / Sjöfartsskola	navigational school	école de navigation
Metsäkoulu / Forstskola	forestry school	école forestière
Maatalouskoulu / Lantbruksskola	normal school for agriculture	école agricole
Emäntäkoulu / Husmodersskola	housecraft school	école ménagère
Talouskoulu / Hushållsskola	school for home economics	école d'économie domestique
Kotiteollisuuskoulu / Hemslöjdsskola	school for training home handicraft	école d'artisant familial
Taideteollisuusopisto / Konstindustriella läroverket	institute of industrial design	institut des arts industriels
Teknillinen opisto / Tekniskt läroverk	technical college, upper level of non-academic technological education	collège technique (cycle supérieur)
Kauppaopisto / Handelsinstitut	commercial college upper level of non-academic commercial education	école de commerce (cycle superieur)

Yhteiskunnallinen Korkeakoulu/ Social- och Kommunalhögskola	institute of social sciences	institut des sciences sociales
Metsäopisto / Forstinstitut	institute of forestry (non-academic)	institut de sylviculture
Maatalousopisto / Lantbruksinstitut	agricultural college (non-academic)	institut d'agriculture
Kotitalousopisto / Institut för huslig ekonomi	institute for home economics (non-academic)	institut d'économie domestique
Seminaari / Seminarium	training school for primary school teachers	école normale pour les maîtres de l'enseignement primaire
Opettajakorkeakoulu / Lärarhögskola	primary school teachers' college, for students who have completed senior secondary school	école normale pour les étudiants qui avant achevé leurs études secondaires se destinent à l'enseignement primaire
Kotitalousopettajaopisto / Institut för lärare i huslig	institute for teachers in home economics	institut pour maîtres d'économie domestique
Normaalilyseo / Normallyceum	normal school, for the training of secondary school teachers	école normale pour la formation des maîtres de l'enseignement secondaire
Ammattikoulujen opettaja-opisto / Institut för lärare i yrkesskolor	school for the training of teachers of vocational subjects	école normale pour la formation des maîtres de l'enseignement professionnell
Kotiteollisuusopettajaopisto / Hemslöjdslärarinstitut	school for the training of teachers of home handicraft	école normale pour la formation des maîtres des études d'artisant familial
Yliopisto / Universitet	university	université
Korkeakoulu / Högskola	university; school, college or institute of university level	université ou institut d'enseignement académique (grande école)
Ammatillinen opetus / Yrkesutbildning	vocational education	enseignement professionnel
Vapaa kansansivistystyö / Fri folkbildningsverksamhet	free supplementary education (adult education)	éducation libre supplémentaire

Kansanopisto / Folkhögskola	folk high school	institut d'études libres populaires
Kansalais- tai Työväenopisto / Medborgar- eller Arbetarinstitut	civic or workers' institute	institut d'études libres (des travailleurs)
Kouluhallitus / Skolstyrelsen	National Board of Schools	direction générale des écoles
Ammattikasvatushallitus / Yrkesutbildningsstyrelsen	National Board of Vocational Education	direction générale des écoles professionnel

BIBLIOGRAPHY

- "Act on the Development of Universities and Institutes of Higher Education in 1967–1981" & "Decree on the Development of Universities and Institutes of Higher Education in 1967–1981" (stencilled summary for UNESCO), 1967
- Gustafson, M.: Education in Finland, Reference Publications 2, Ministry for Foreign Affairs, Helsinki 1967
- Higher Education and Research in Finland, Reference Publications 3, Ministry of Education, Helsinki 1968
- Kyöstiö, O.K.: Die Schule und Schulerziehung in Finnland (Schools and School Education in Finland), Jyväskylä 1961
- Kyöstiö, O.K.: Finland. Schools of Europe, Vol. I: Part A and Part B (ed. Walter Schulze), Belz, Weinheim 1968; also in French and German.
- Kyöstiö, O.K.: The Finnish School in Transition, Oulu 1969
- Niini, A.: Vocational Education for Industry, Handicrafts, Commerce and Navigation in Finland, Helsinki 1968; also in Swedish and German.
- Official Statistics of Finland XXXVII: 1, Higher Education 1966/67, Helsinki 1969
- Report of the Committee on the Comprehensive School Reform (stenciled summary), Helsinki 1967

- Report of the Committee for the Planning of Teacher Training (stenciled summary), Helsinki 1967
- Report of the Committee on the Access to Secondary Education Outside the Secondary Schools Proper in Finland (stenciled summary), Helsinki 1967
- Ruge, H.: Educational Systems in Scandinavia, Oslo 1962
- Study on the Organization and Scope of Modern Language Teaching (stenciled report for the Council of Europe 1970)
- The System of Higher Education in Finland and its Development (stenciled report for the Council of Europe), 1970
- The Training of Teachers of Commercial Education in Finland (stenciled report for the Council of Europe), 1970
- Toivonen, E.: Comprehensive School in Finland (stenciled report of the National Board of Schools), Helsinki 1969
- Training of Teachers in Technical and Vocational Education (stenciled report for the Council of Europe), Helsinki 1969
- World Survey of Education, I–V. UNESCO, Paris 1955, 1958, 1961, 1966 and 1969.